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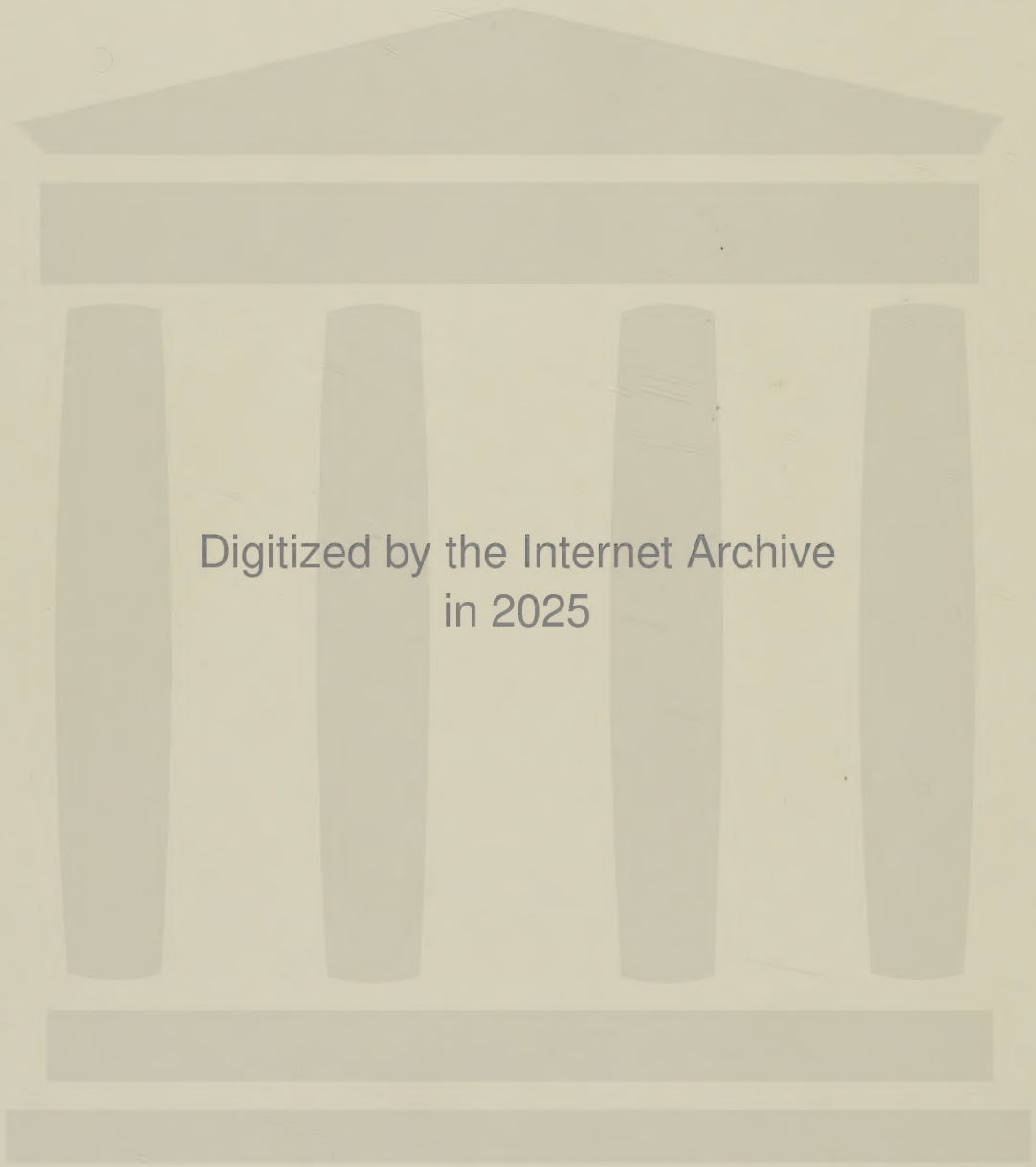
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Oceanic Observations of the Pacific

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OCEANIC OBSERVATIONS OF THE PACIFIC

1955
THE NORPAC DATA

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BERKELEY AND LOS ANGELES TOKYO 1960

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OCEANIC OBSERVATIONS OF THE PACIFIC: 1955, THE NORPAC DATA

prepared
by the
NORPAC COMMITTEE

University of California Press and University of Tokyo Press
Berkeley and Tokyo, 1960

The NORPAC COMMITTEE consisted of representatives from the Hakodate Marine Observatory, the University of Hokkaido, the University of Kagoshima, the Japanese Hydrographic Office, the Japan Meteorological Agency, the Biological Laboratory of the U. S. Bureau of Commercial Fisheries, Honolulu, the Pacific Oceanographic Group of the Fisheries Research Board of Canada, the Scripps Institution of Oceanography of the University of California, the Biological Laboratory of the U. S. Bureau of Commercial Fisheries, La Jolla, the Tokai Regional Fisheries Research Laboratory, the Tokyo University of Fisheries, and the University of Washington; Chairman, O. E. Sette; Secretary, J. L. Reid, Jr.

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The editors suggest that this volume be cited as:
OCEANIC OBSERVATIONS OF THE PACIFIC: 1955, THE NORPAC DATA
prepared by the NORPAC COMMITTEE
University of California Press and University of Tokyo Press, Berkeley and Tokyo, 1960

NORPAC VOLUMES (ATLAS and DATA): Price $10

University of California Press
Berkeley and Los Angeles

University of Tokyo Press
Tokyo, Japan

Cambridge University Press
London, England

Manufactured in the United States of America

Preface

"Oceanic Observations of the Pacific" is a medium for publication of oceanographic data collected in the Pacific Ocean and its adjacent seas. It was planned at first that each volume should include all data collected by cooperating institutions within a particular year. This volume, however, presents data from only a group of expeditions made in 1955, known as the NORPAC expeditions. Other data collected during that year will be published in the regular 1955 volume of the series. The NORPAC data volume and its companion, the NORPAC Atlas, are special volumes, joint publications of the University of California Press and the University of Tokyo Press.

During the NORPAC expeditions 1,002 hydrographic stations and more than 2,000 plankton samples were taken by nineteen research vessels of fourteen institutions from three countries. They covered the Pacific Ocean between 20 and 60 degrees north latitude. Most of the observations were made in July, August and September of 1955.

For each oceanographic station, values of temperature, salinity, dissolved oxygen content, inorganic phosphate-phosphorus and other properties are tabulated at observed and at standard depths. Computed values of density and geopotential anomaly are also tabulated at standard depths. The biological data are of several kinds. The quantities of zooplankton are listed and numbers of individuals in various categories of both zooplankton and phytoplankton are tabulated.

The data tabulated in this volume have been used to prepare maps and sections of the various properties in the upper thousand meters of the ocean in the area covered by these expeditions. These graphical presentations are published in the volume

OCEANIC OBSERVATIONS OF THE PACIFIC 1955: THE NORPAC ATLAS
prepared by the NORPAC COMMITTEE
University of California Press and University of Tokyo Press
Berkeley and Tokyo, 1960

THE INSTITUTIONS PARTICIPATING IN THE NORPAC EXPEDITIONS

Country	Ship	Institution	Abbreviation
CANADA	HMCS Ste. Therese	Pacific Oceanographic Group, Fisheries Research Board of Canada	POG
JAPAN	Oshoro Maru	Faculty of Fisheries, Hokkaido University	FFHU
	Kagoshima Maru	Faculty of Fisheries, Kagoshima University	FFKU
	Keiten Maru		
	Meiyo Maru	Japanese Hydrographic Office	JHO
	No. 4 Kaiyo Maru		
	Satsuma		
	Ryofu Maru	Japan Meteorological Agency	JMA
	Yushio Maru	(Hakodate Marine Observatory)	HMO
	Shumpu Maru	(Kobe Marine Observatory)	KMO
	Shumpu Maru	(Nagasaki Marine Observatory)	NMO
	Tenyo Maru	Tokai Regional Fisheries Research Laboratory	TRFRL
	Shinyo Maru	Tokyo University of Fisheries	TUF
	Umitaka Maru		
UNITED STATES	Black Douglas	California Cooperative Oceanic Fisheries Investigations	CCOFI
	Horizon	Scripps Institution of Oceanography of the University of California and the South Pacific Fishery Investigations of the United States Fish and Wildlife Service (now the Biological Laboratory, Bureau of Commercial Fisheries, La Jolla) California Department of Fish and Game	
	Spencer F. Baird		
	Stranger		
	Paolina-T		
	Hugh M. Smith	Pacific Oceanic Fishery Investigations of the United States Fish and Wildlife Service (now Biological Laboratory, Bureau of Commercial Fisheries, Honolulu)	POFI
	Brown Bear	University of Washington, Department of Oceanography	UW

Foreword

In July, August and September of 1955 oceanographers from Canada, Japan and the United States combined their facilities to make a great synoptic survey of the Pacific Ocean north of the parallel of 20 degrees north latitude. This vast area comprises more than 32 million square kilometers, one-sixteenth of the earth's surface. Meteorologists long ago realized that repeated synoptic measurements over large areas are necessary for their studies and took steps to obtain them, but prior to the expeditions reported herein, collectively called NORPAC, not even a single synoptic survey of a broad oceanic area had ever been made.

A network of synoptic observations of the atmosphere can be made relatively inexpensively from fixed stations, on land at least, but at the present time similar oceanic measurements require that a fleet of costly and specialized research ships operate simultaneously in separate but contiguous areas in accordance with a carefully worked out plan. The oceanographic problem would be overwhelming if a separate ship were required for each station, but because of the greater inertia of the ocean, it is believed that the needed degree of simultaneity is much less than in the atmosphere, so that a considerable number of stations can be occupied by one ship.

Even so, a synoptic survey of the North Pacific would have been impossible until relatively recently. During the last fifteen years, however, the numbers of ships and scientists concerned with oceanographic work in the Pacific have considerably increased. By 1953 it had become apparent that through combining the efforts of all institutions a great task could be accomplished in a short period. The enormous gyral of the North Pacific had been examined before, but observations over much of the region were too sparse and covered too long a time for their results to be combined in picturing the distribution of properties and currents over the whole area in a particular season. Contiguous cruises made by the California Cooperative Oceanic Fisheries Investigations and the Pacific Oceanographic Group, and by the former and the Pacific Oceanic Fishery Investigations, and the experience of several of the Japanese institutions at about the same time had confirmed the great advantages to be gained by covering large areas in short periods.

Accordingly, in 1953 Mr. Joseph L. Reid, Jr., proposed that a cooperative synoptic survey of the North Pacific Ocean be undertaken in the summer of 1954 by oceanographic ships of Canada, Japan and the United States. Reid's proposal was circulated to Canadian and American institutions on the Pacific Coast and in Hawaii. Inquiry was made through the Japanese Hydrographic Office to learn whether the Japanese institutions would take part; a large number of them immediately agreed to do so. It proved impossible to make the necessary budgetary and operating arrangements by the summer of 1954, but all institutions were able to adjust their plans to be able to participate in the survey by the following year.

During 1954 and early 1955 the plans of the separate institutions were compared and integrated into a single over-all plan, and in the summer of 1955 the NORPAC expeditions were carried out. Nineteen research vessels from fourteen institutions put to sea to complete the most ambitious oceanographic survey ever attempted.

The bibliography lists papers that have already appeared and reveals at once the range of the studies that have resulted from the NORPAC expeditions. Through the publication of this volume and the accompanying atlas the data will reach a much wider group of scientists. We believe that with these volumes as material and framework, many problems whose very formulation was obscure before can now be investigated.

The data from these expeditions will have many uses, ranging from their direct application in fisheries problems to the fundamental question of understanding the ocean itself: its circulation and the distribution of its immense load of dissolved and particulate matter; the replenishment of its upper layers with nutrients through the processes of mixing and upwelling; and its role in the heat and water budget of the earth.

The NORPAC expeditions showed that agencies of many different nations can cooperate in oceanographic exploration and that it is to their advantage to do so. During 1956 a comparable area was measured in the Equatorial Pacific by cooperating agencies from Japan, France and the United States. Data and charts from these EQUAPAC expeditions will be published shortly.

The experience gained from NORPAC and EQUAPAC in international cooperative work at sea proved valuable in laying plans for and carrying out the more widespread oceanographic program of the International Geophysical Year. We hope that this experience will also prove helpful in developing the longer-range program of the Special Committee on Oceanic Research of the International Council of Scientific Unions, and particularly the plans of this committee for a combined expedition by many countries to the Indian Ocean. Ultimately we may hope for a concerted and continuing series of synoptic observations taken at regular intervals on a systematic grid of observing stations over the entire world ocean. This hope is given greater substance by recent developments of instrument-carrying buoys that can be permanently anchored in deep water to supplement observations from research ships.

K. Suda R. Revelle

Introduction

It was planned that as much as possible of the NORPAC expeditions should be made in August of 1955. Limitations were imposed by the large areas which some of the vessels had to cover (Hugh M. Smith), the long distances which some had to go (Umitaka Maru and Oshoro Maru), and the necessity for fitting the work into the regular plans of the various agencies. August was chosen so that the northern area could be included with least chance of interference from weather. Weather over the whole area was better than expected. Both Shumpu Maru and Tenyo Maru experienced typhoons but pressed on to complete their planned work. The expeditions were remarkably free from bad weather and breakdowns. Two vessels (Umitaka Maru and Stranger), making hydrographic expeditions for the first time, accomplished their work without any of the serious difficulties which often beset shakedown cruises. The Oshoro Maru visited Seattle en route and the Umitaka Maru visited Honolulu.

The work at sea was accomplished without remarkable incident. A little less than half of the stations were made in August, about a quarter each in July and September, and less than three per cent each in June and October. They are therefore far more nearly synoptic than any previous measurements of a comparable area of the ocean.

A tabulation of the methods of collecting and processing the physical and chemical data is presented in Summaries I and II. Most of the processing was successful. The most serious difficulties were encountered in the determination of inorganic phosphate-phosphorus. The phosphate measurements of Black Douglas, Hugh M. Smith and Oshoro Maru are not considered usable although a final decision was not made on the Oshoro Maru data until they had already been included in the Atlas and tabulated in this volume.

The biological collections are described in Summaries III and IV, and their processing is described in the introductory material.

The biological materials from most of the Japanese agencies were assembled by Mr. Z. Nakai of the Tokai Regional Fisheries Research Laboratory. Dr. E. H. Ahlstrom, of the South Pacific Fishery Investigations (now Biological Laboratory, U. S. Bureau of Commercial Fisheries, La Jolla), arranged the biological tables and prepared the section describing the various methods of processing the plankton samples. The introductory material to the physical and chemical data was assembled and prepared by Mr. J. L. Reid, Jr., of the Scripps Institution of Oceanography, who also prepared the five summary tables.

The physical and chemical tabulations in this volume were typed at the Japanese Hydrographic Office. The biological data and the introductory material were typed at the Scripps Institution of Oceanography. The printing was done by the University of California Press.

Joseph L. Reid, Jr.
Secretary, NORPAC COMMITTEE and
Special Editor of the NORPAC volumes

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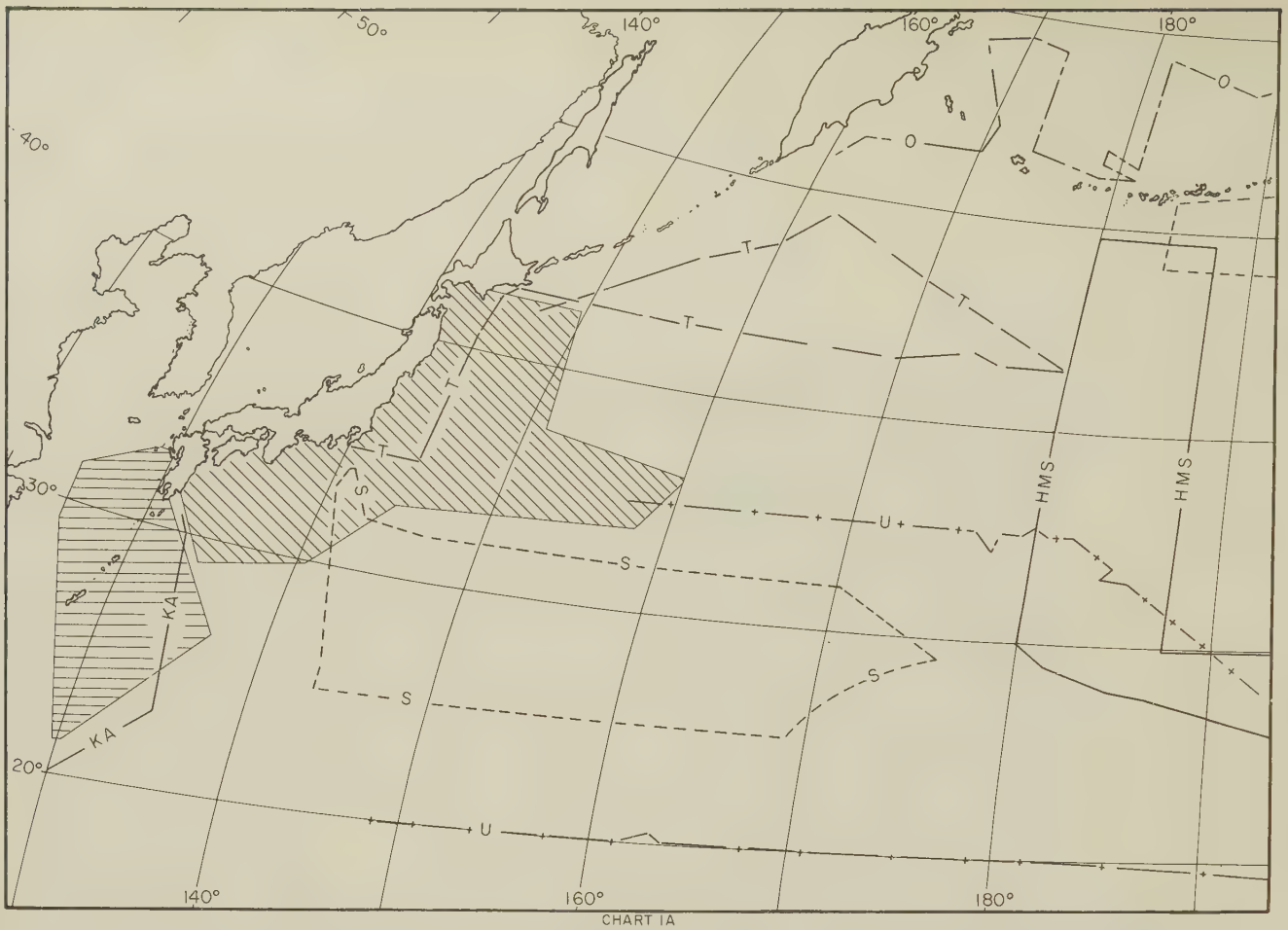

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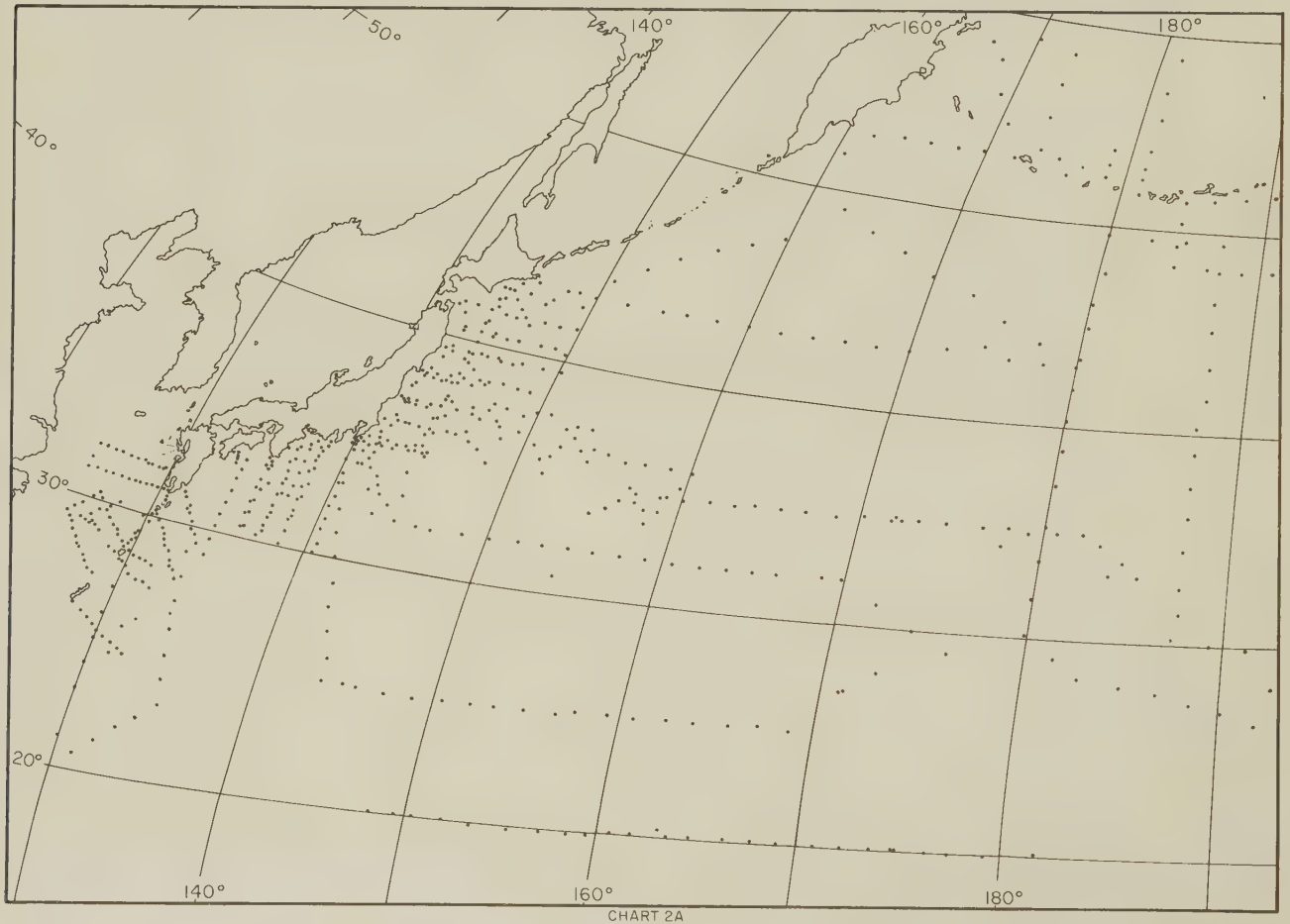

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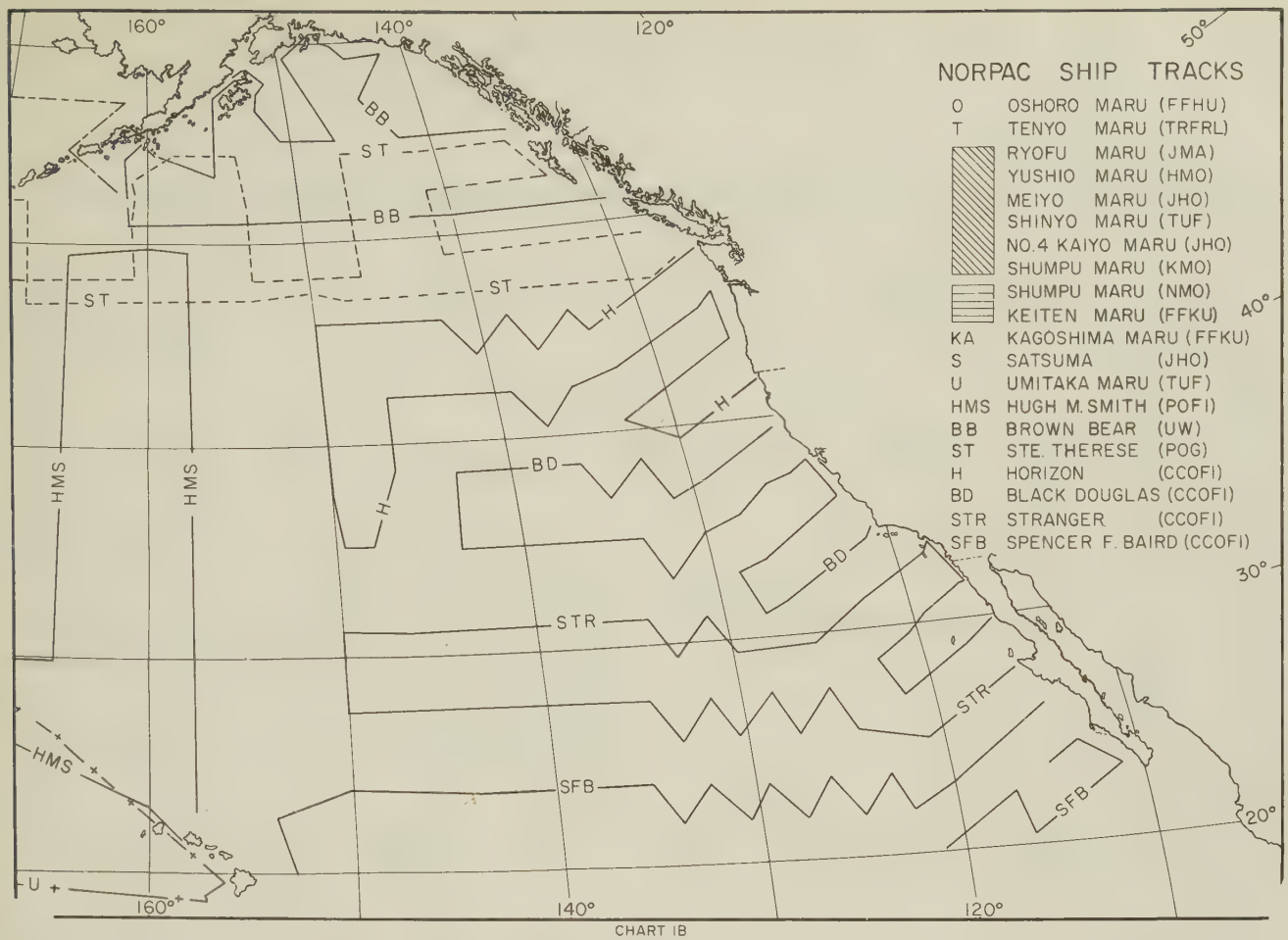

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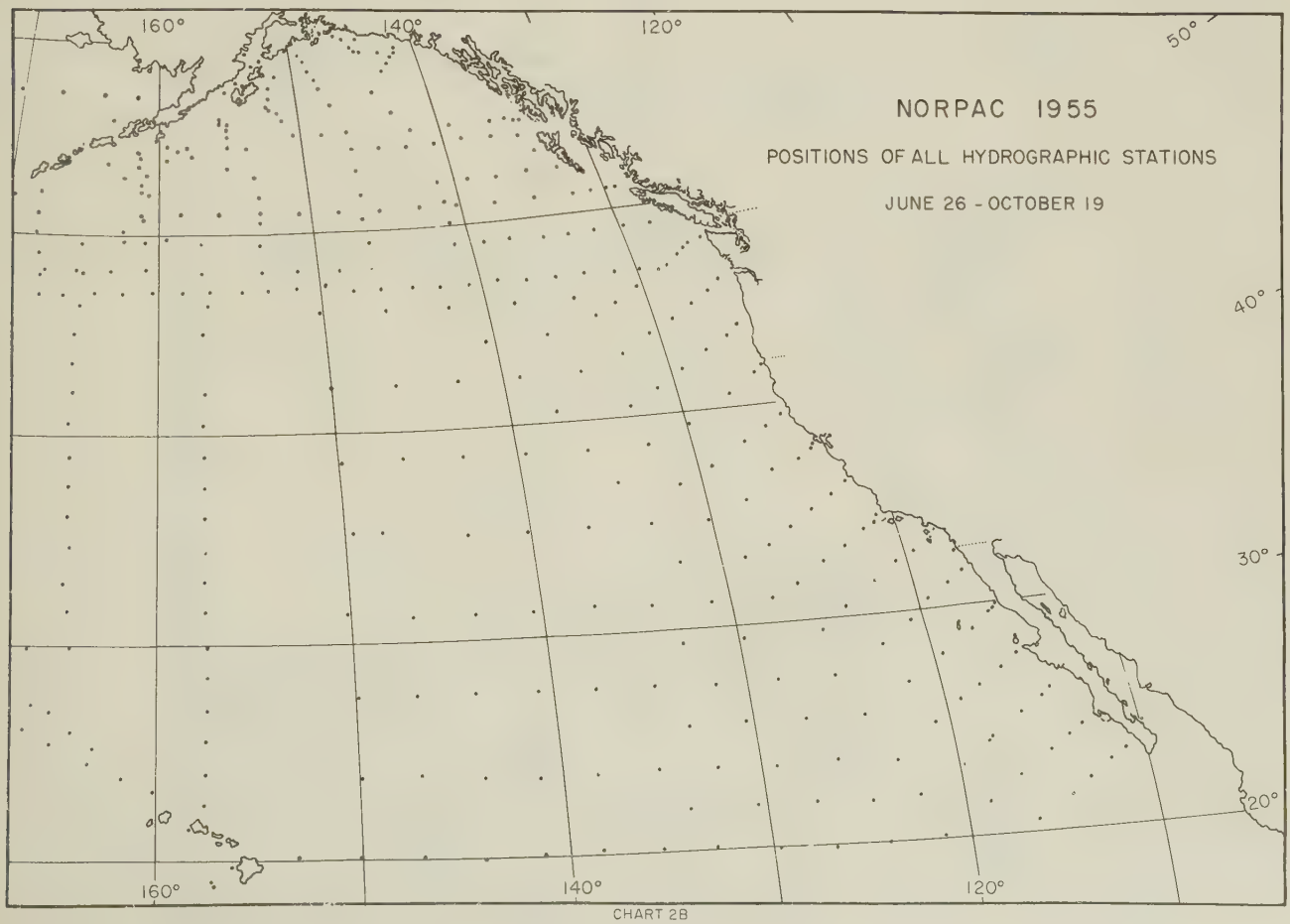

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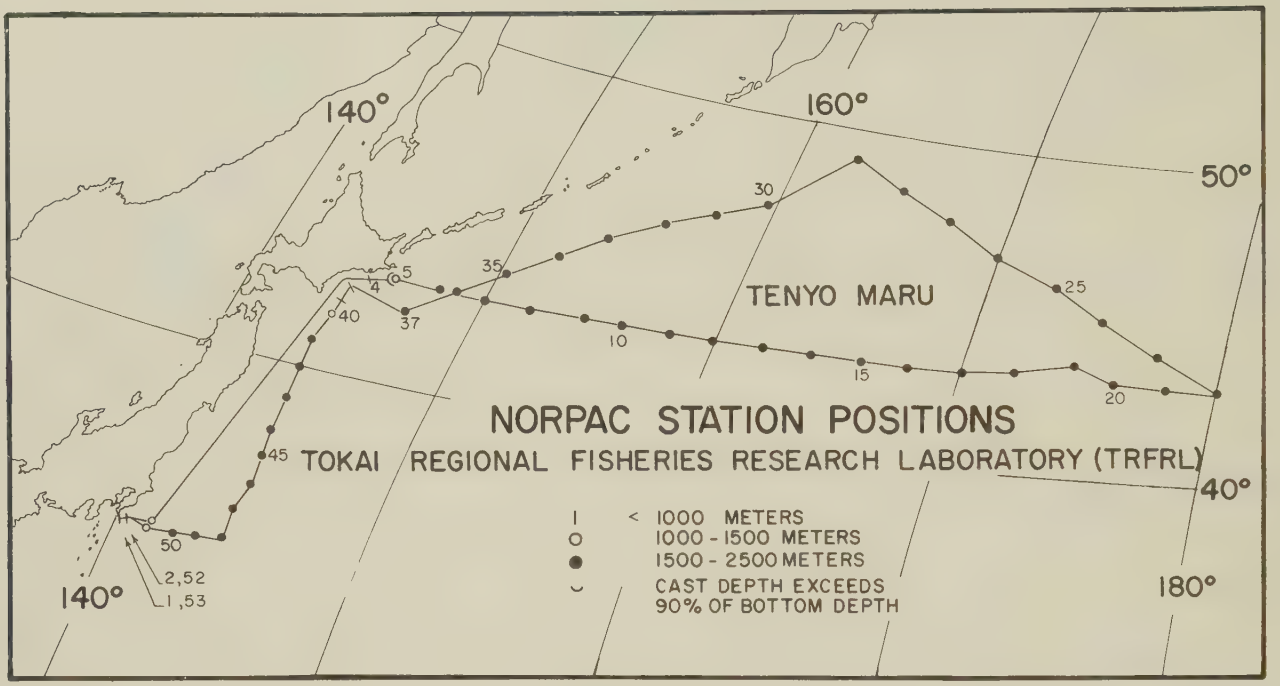

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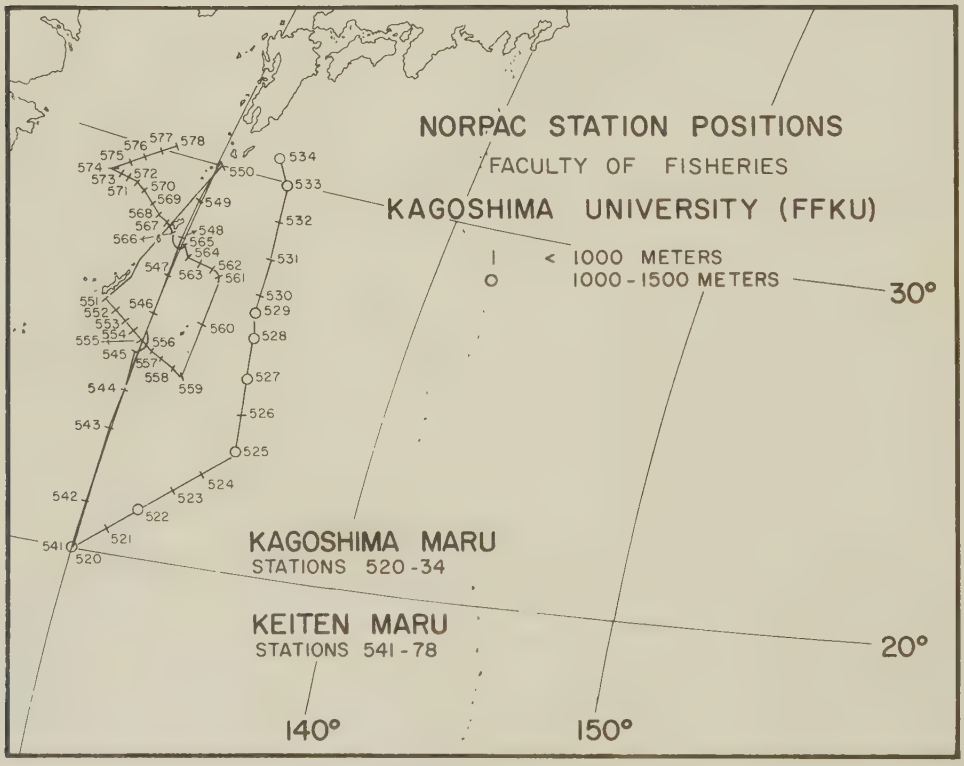

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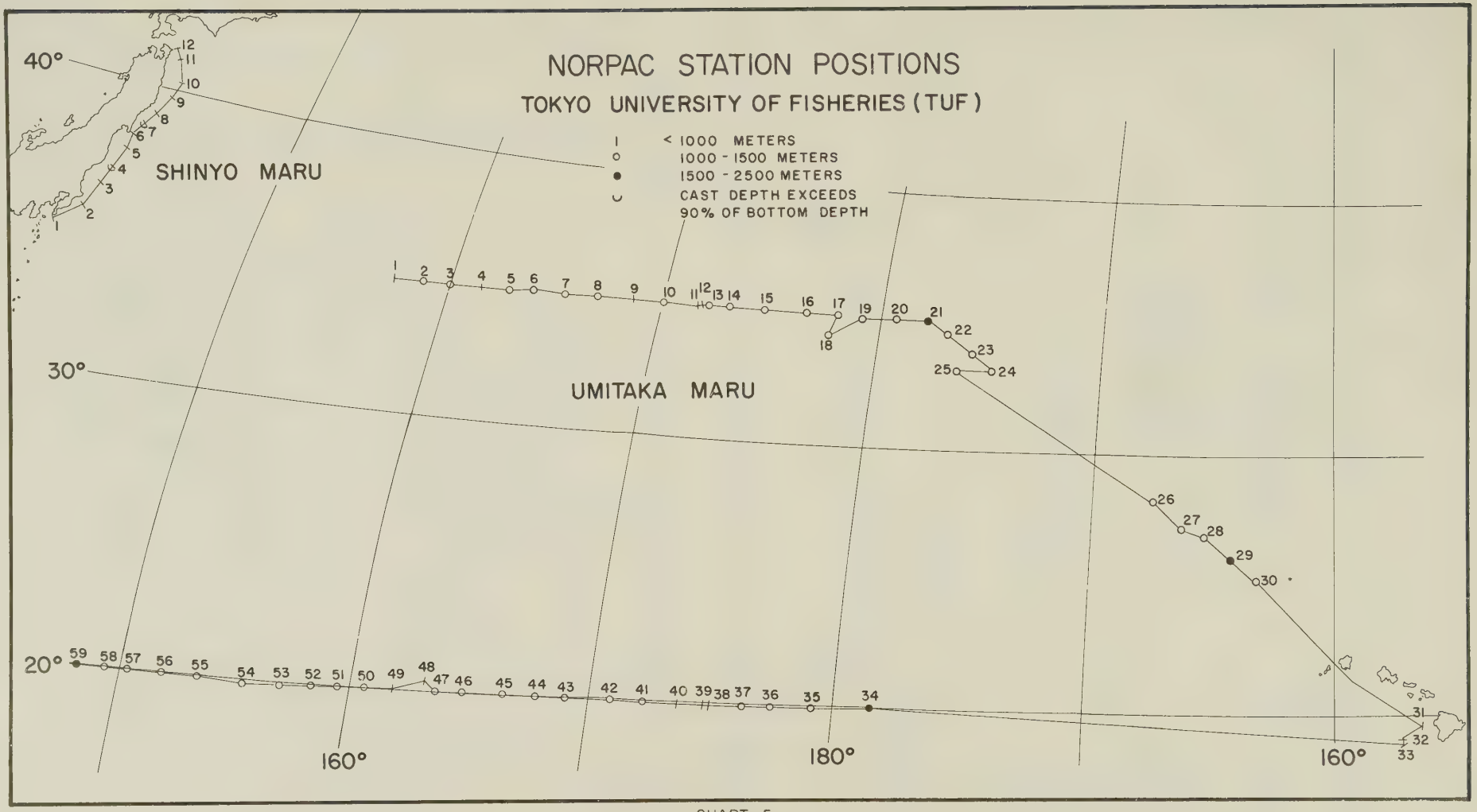
NORPAC STATION POSITIONS
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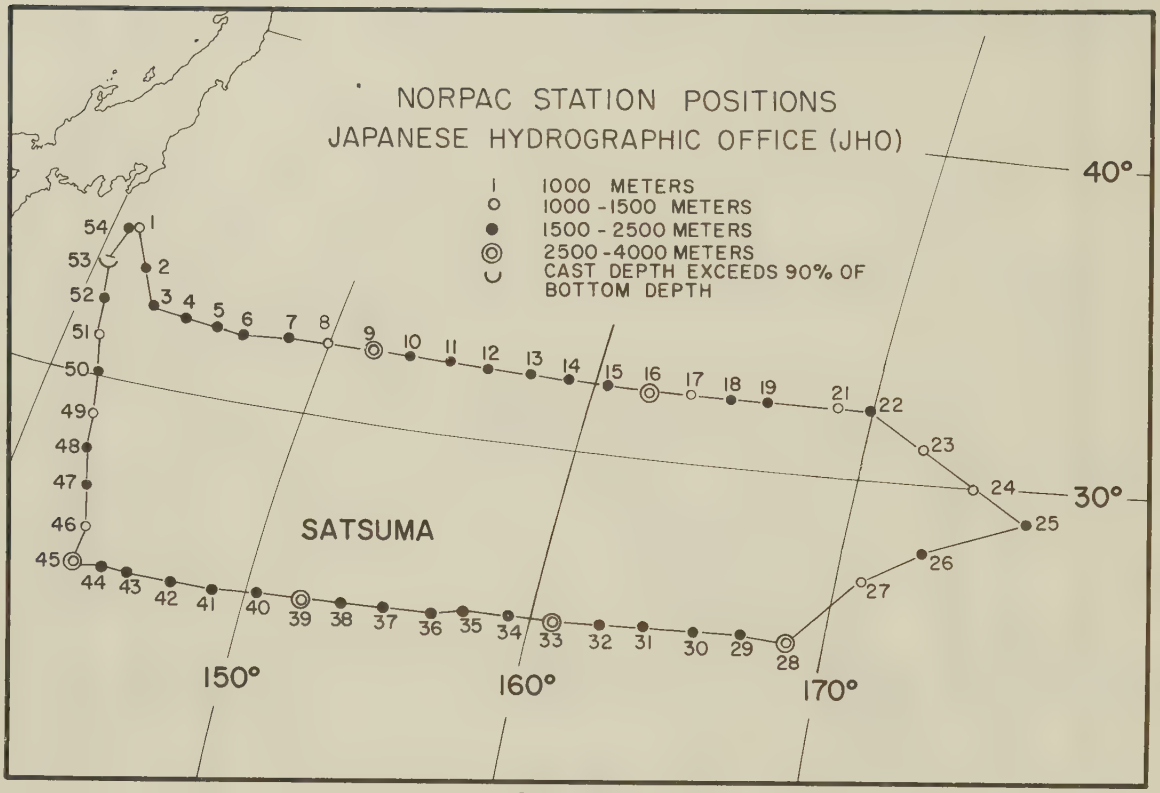

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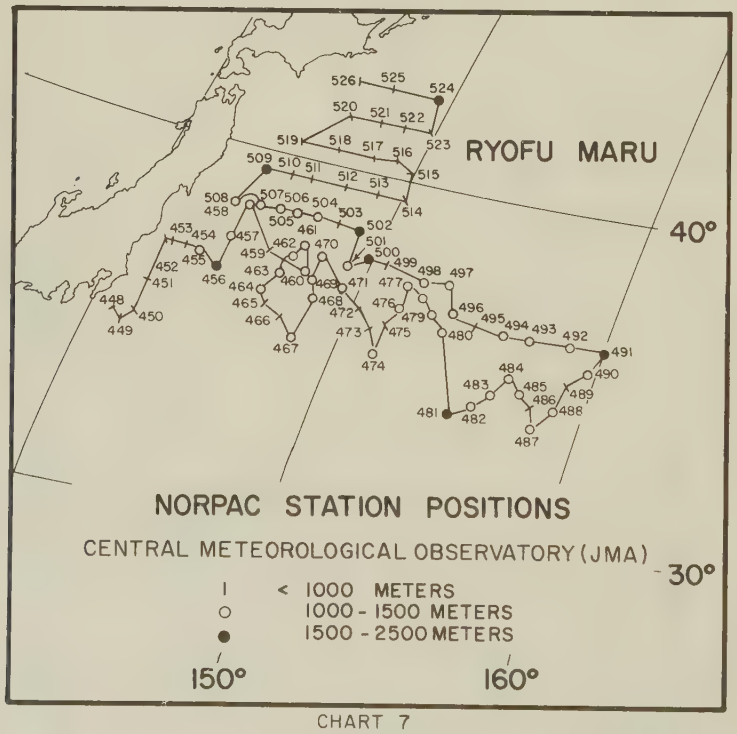

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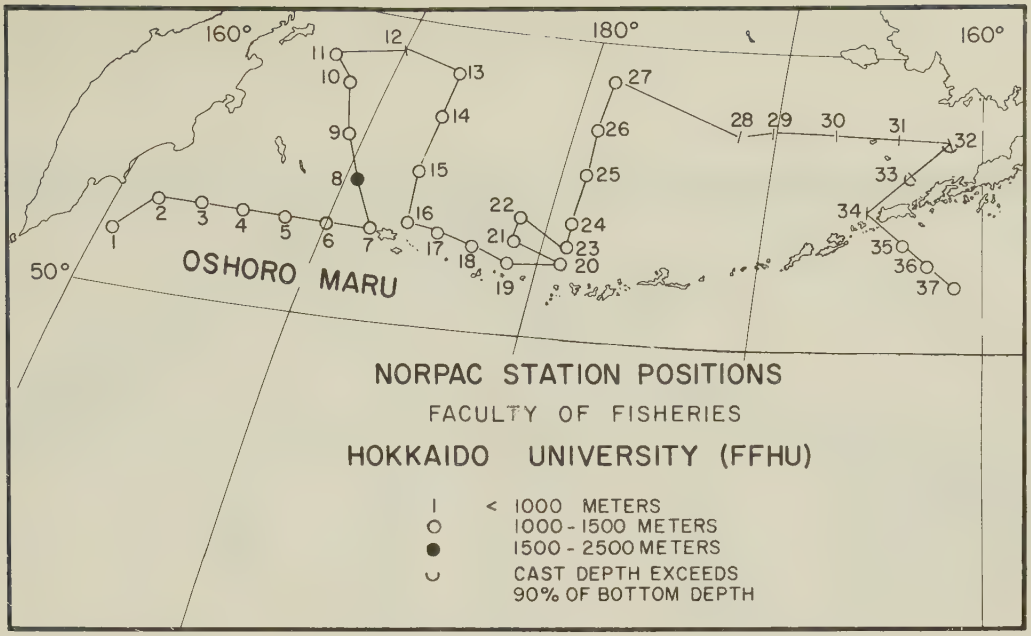


CHART 8

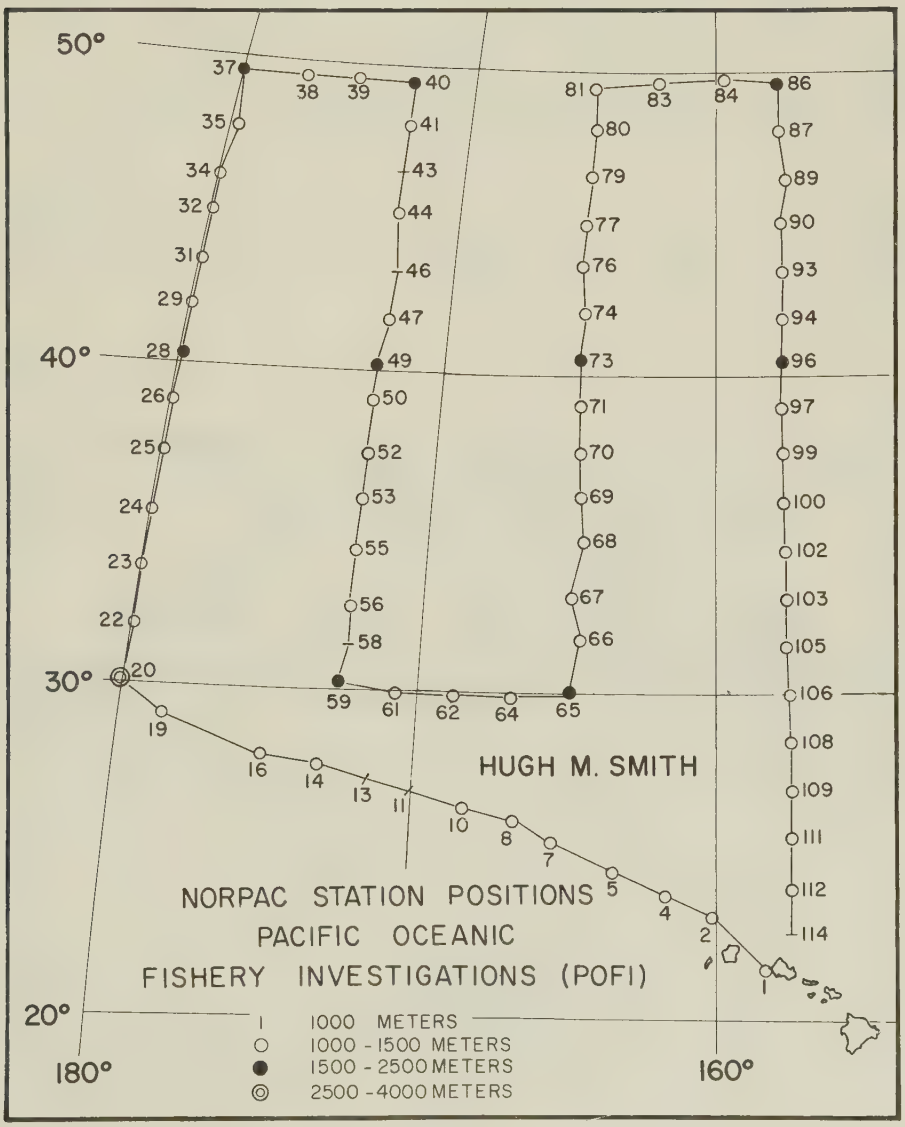
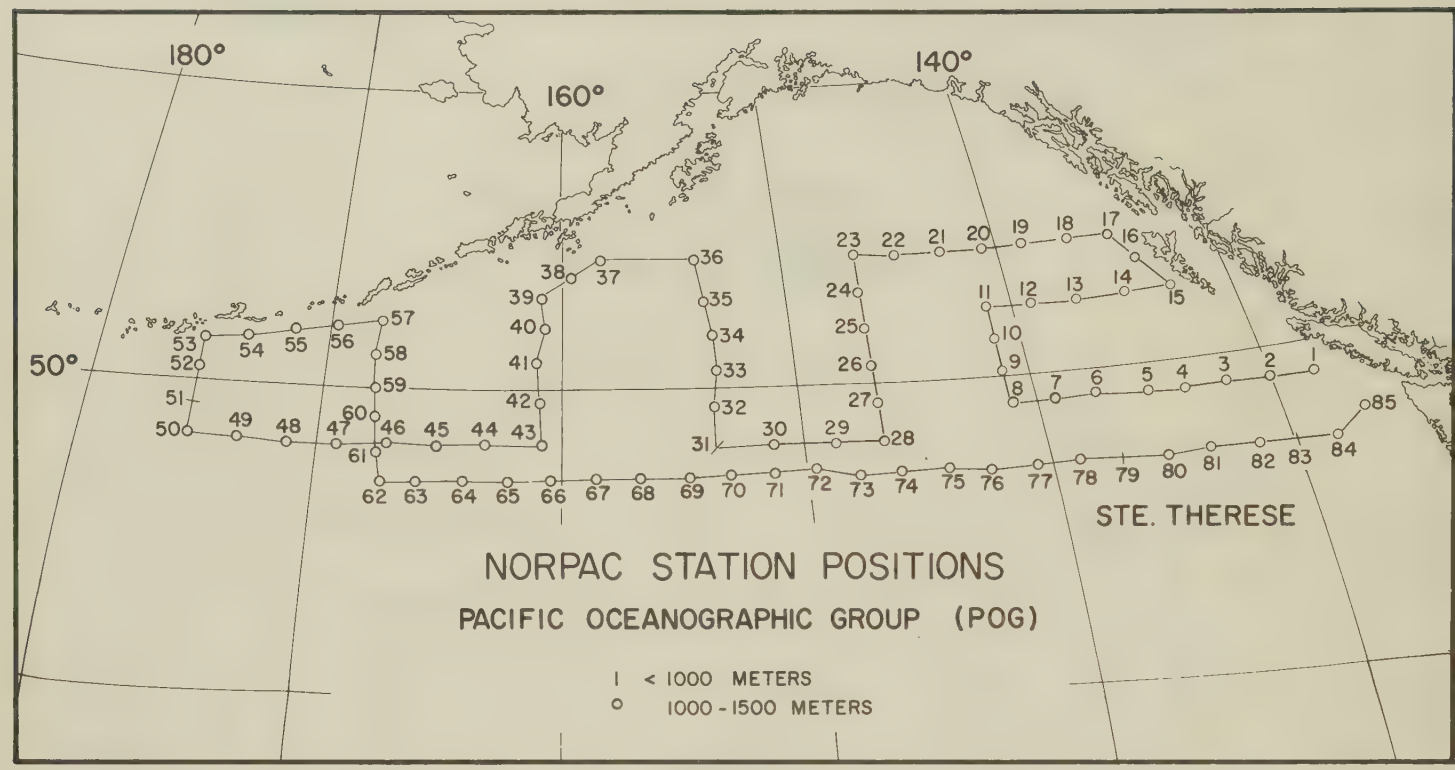


CHART 9



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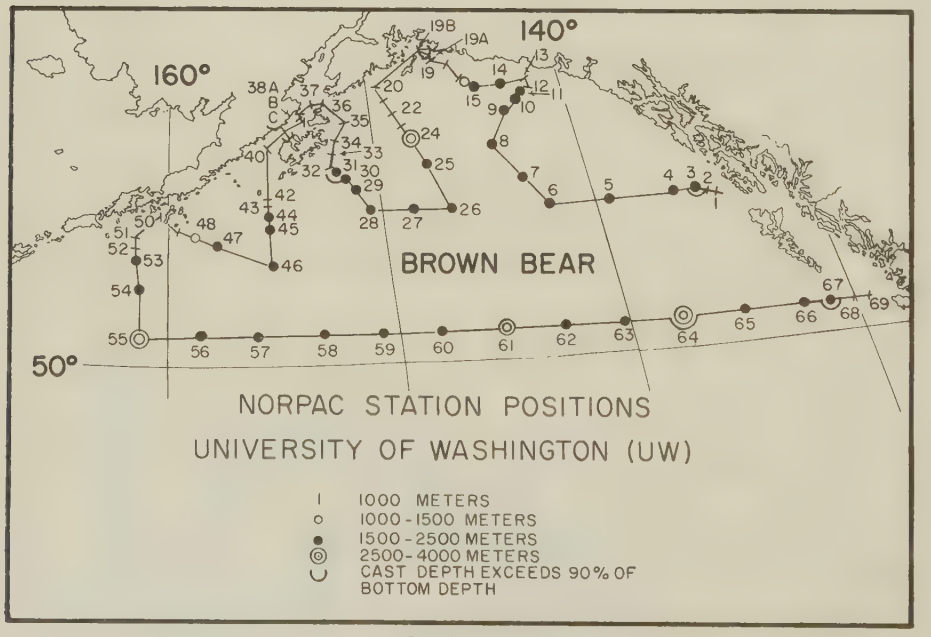
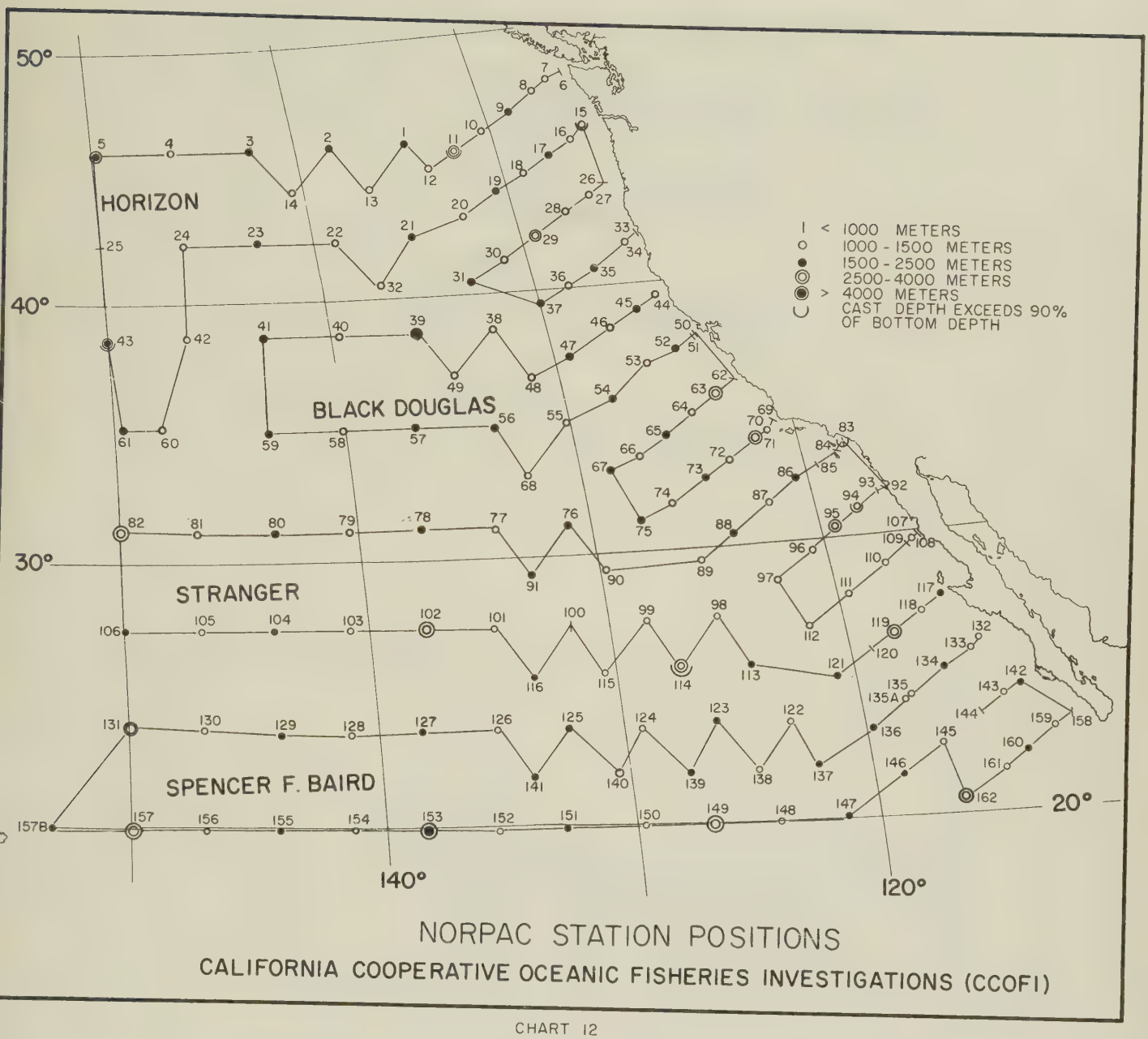


CHART 11



NORPAC STATION POSITIONS

CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS (CCOFI)

CHART 12

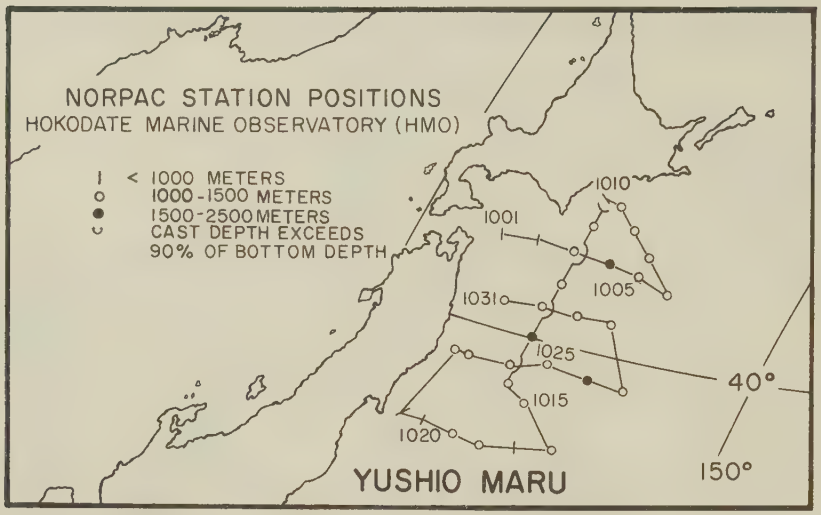


CHART 13

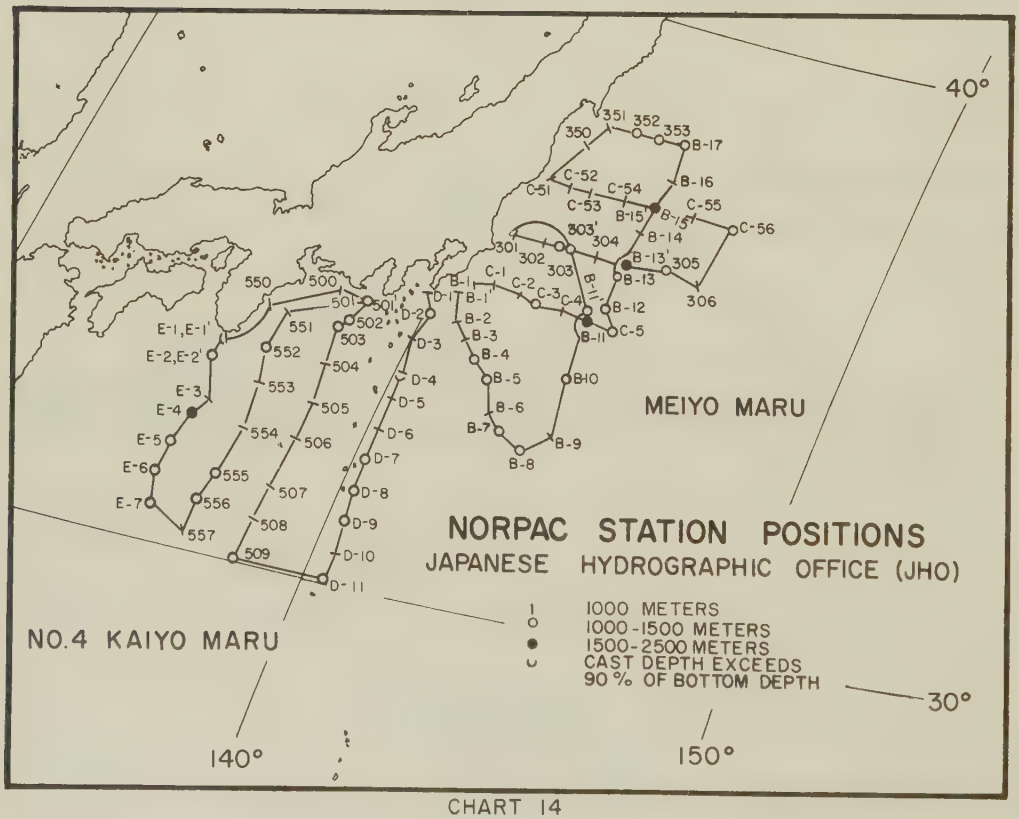


CHART 14

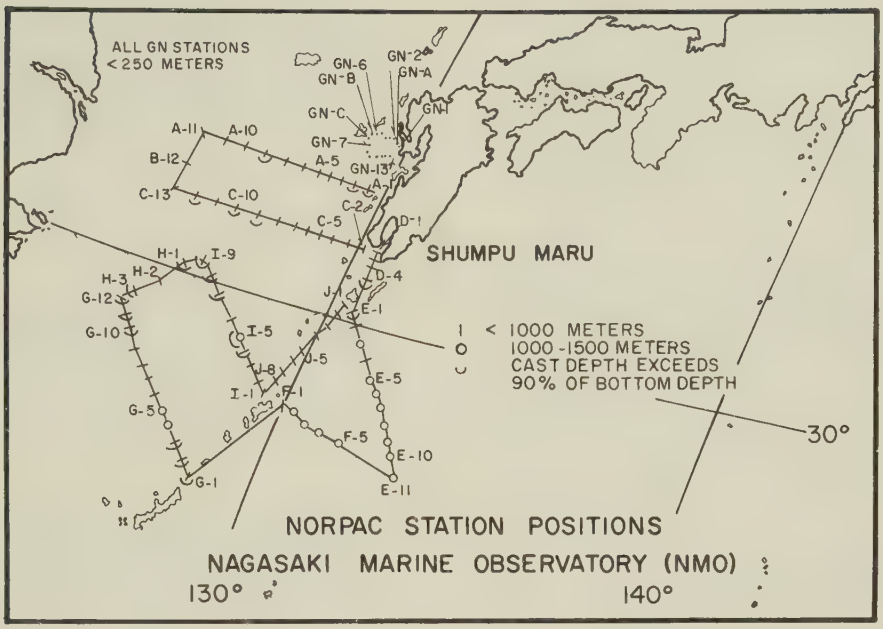


CHART 15

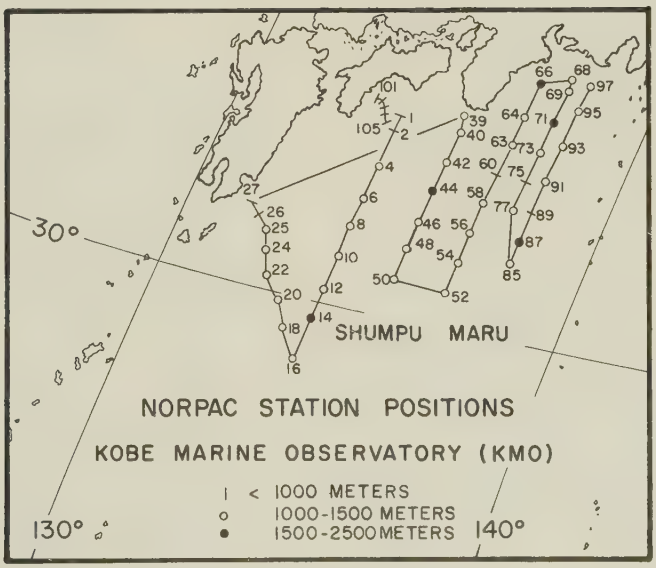


CHART 16

Arrangement of Physical and Chemical Data

This volume presents the physical and chemical data and the greater part of the biological data collected on the NORPAC expeditions. The biological materials have been examined in great detail in some instances, in much less detail in others; other presentations will follow in various journals.

STATION POSITIONS

The positions of all hydrographic stations made by the NORPAC expeditions are shown in Chart 2. Identification of the various stations and the station patterns of individual vessels may be made by referring to Charts 3 through 16. The positions of the biological observations are in most cases identical with hydrographic stations.

The tabulations of the physical and chemical measured and computed quantities are in the standard format of this publication with minor modifications to adapt it to the Japanese method of making hydrographic stations in a series of several short casts.

A listing of the physical and chemical observations made by the NORPAC expeditions is given in Summary I. A general outline of the methods and equipment used in collecting and processing the data follows in Summary II. Estimates by the various agencies of the range of error of the measurements are included where possible.

Unless routine field tests have been made, the accuracy of a measurement may not be established and a "nominal" accuracy of the method is listed; that is, the accuracy to be expected of a trained observer with good equipment and materials in the absence of any unforeseen difficulties such as evaporation of samples, deterioration of reagents, erratic behavior of stopcocks, leakage of Nansen bottles, etc.

However, even when one accepts the nominal accuracy of temperature ($\pm 0.02^{\circ}C$) and salinity ($\pm 0.03‰$), random errors as great as four centiliters per ton in specific volume anomaly may be expected. Previous publications of oceanographic data, including some in this series, have in many cases tabulated this quantity and its integral to more digits than are significant. In this volume tabulations of specific volume anomaly beyond one part in 10^5 and of geopotential anomaly beyond one dynamic centimeter are not considered significant.

EXPLANATION OF TABLES

Side Running Heads

The name of the institution providing the data is shown in the margin near the top of the page. Titles are abbreviated and may be identified in the list of participating institutions. The station number is given in the margin opposite the station data.

Headings of Groups of Columns

OBSERVED: Corrected data at accepted depths of observation.

INTERPOLATED: Data at standard depths, interpolated from smooth distribution curves. The standard depths are those recommended by the International Association of Physical Oceanographers in 1936 (Assoc. d'Océanographie Physique, Procès Verbaux, No. 2, p. 59, 1937).

COMPUTED: The results of computations based, in general, on interpolated values.

Column Headings

Z	Depth in meters at which observation was made or an interpolated value obtained.
W	Wire angle of cast at time of messenger release.
T	Temperature of water in degrees centigrade at observed or interpolated depths.
S	Salinity of water in grams per kilogram (‰) at observed or interpolated depths.
O_2	Concentration of dissolved oxygen in milliliters per liter (ml/L) at observed or interpolated depths.
O_2	Percentage of oxygen saturation at interpolated depths (HMCS Ste. Therese).
PO_4-P	Concentration of dissolved inorganic phosphorus in microgram atoms per liter (μg at/L) or micromoles per liter at observed or interpolated depths.
σ_t	Sigma-t in grams per liter at observed or interpolated depths. Sigma-t can be defined $\sigma_t = 1000 (\rho_{ST0} - 1)$ Where ρ_{ST0} is the density, in grams per cubic centimeter, of water of salinity, S, temperature, T, and at standard atmospheric pressure.
δ_T	Thermosteric anomaly, the pressure-independent part of the specific volume anomaly. Specific volume anomaly is defined as $\delta = \alpha_{stp} - \alpha_{35,0,p}$

and is computed as

$$\delta = \Delta_{s\nu} + \delta_{sp} + \delta_{\nu p}$$

The quantity $\Delta_{s\nu}$ has been discussed by Sverdrup, Johnson and Fleming (1942, p. 58) and approximately represents potential specific volume anomaly. It is used here with the name (thermosteric anomaly), symbol (δ_T) and unit (centiliter per ton) suggested by Montgomery and Wooster (1954).

ΔD Geopotential anomaly, in dynamic meters (dynamic height), of the layer of water between the surface and the designated standard pressure. Geopotential anomaly is the difference between the geopotential thickness of the observed layer and the geopotential thickness of a layer bounded by the same pressures but having standard temperature 0°C and salinity 35‰. The tabulated anomaly is determined from an approximation of the integral

$$\Delta D = \int_0^{p_z} \delta \, dp$$

where p is pressure in decibars (assumed equal to depth in meters) and subscript z denotes the value at the bottom of the layer under consideration. Since geopotential thickness is the product of geometrical thickness and the acceleration of gravity, a dynamic meter is equal to 10^5 ergs per gram and is the change in geopotential over a vertical distance of approximately 1.02 meter.

pH Negative logarithm of the hydrogen ion concentration at observed or interpolated depths.

Si Concentration of dissolved silicate in microgram atoms per liter (or micromoles per liter) at observed depths.

Tot. P. Amount of total phosphorus in microgram atoms per liter (or micromoles per liter) at observed or interpolated depths.

Supplementary Station Information

Supplementary information about each station is to be found just above the tabulated data. For all vessels this information includes name of ship, date and time of observation, and latitude and longitude of station. In the station headings for the Canadian and American vessels the station position is followed by depth of water (in fathoms), description of surface weather and sea state, wind direction and force (Beaufort scale) and wire angle. When there was more than one cast on a Canadian or American station, messenger times and wire angles are given for the casts in the order of increasing depth.

In the Japanese station headings the information following latitude and longitude is presented in a coded form which is explained in the accompanying table. The wire angles of the Japanese casts are given in a separate column of the tabulated data.

Notes on the Tabulation of Data

1. Observed temperatures obtained by thermograph or bucket thermometer are reported only to tenths of a degree. Reversing thermometer temperatures are reported to hundredths of a degree.

2. Missing observed values are indicated by a hyphen (-).

3. Extrapolated values and values interpolated between remote observations are entered within parentheses.

4. Data from different casts on a station are separated by a blank line.

5. In the data of the California Cooperative Oceanic Fisheries Investigations three special notations are used where appropriate:

p: pretrip or posttrip (premature or delayed closure of water bottle and reversal of thermometers)

Values which are not used in interpolation because they seem to be in error are indicated as follows:

r: rejected value

u: uncertain value

Coded Data in the Japanese Station Headings

In the data reported by Japanese agencies some of the heading information has been presented in a different fashion. After the latitude and longitude the information has been coded. It is given in the following order: ddff ww TTT $d_W d_W P_W H_W$ $d_S d_S P_S H_S$ F T_r C Depth Current Pl La Remarks. The first two groups are in the international marine meteorological code (1, 2) in which each letter stands for one numeral. The order is the same for all Japanese ships, except that $d_W d_W P_W H_W$ and $d_S d_S P_S H_S$ were not reported by the Kagoshima Maru and Keiten Maru. The meanings of the code groups, both international and Japanese, are given below:

ddff Surface wind in the international code.

dd Denotes wind direction (true) in tens of degrees from which wind is blowing. Scale, 00-36.

ff Wind speed in knots.

ww — Present weather at the time of observation, from the international code (1).

TTT — Air temperature expressed in tenths of degrees centigrade.

$d_W d_W P_W H_W$ — Wind waves in the international code.

$d_W d_W$ — Direction from which waves are coming, in code.

P_W — Period of the waves, in code.

H_W — Mean maximum height of waves, in code.

$d_S d_S P_S H_S$ — Swell reported in the same code as the international code for wind waves.

$d_S d_S$ — Direction from which swell is coming, reported in the international code for wind-wave direction.

P_S — Period of the swell, reported in the international code for wind-wave period.

H_S — Mean maximum height of the swell, reported in the international code for wind-wave height.

F — Method of fixing the ship's position.

Code	
1	Position estimated by dead reckoning, more than 24 hours after the last fix by celestial observations.
2	Position estimated by dead reckoning, less than 24 hours since the last fix by celestial observations.
3	Position estimated from LORAN measurement.
4	Position estimated from radar observations.
5	Position estimated from bearings of the shore.

T_r — Transparency. Two digits give length of wire in meters at which a Secchi disc is just visible. Two more digits, separated from the first pair by a hyphen, give the angle in degrees of the Secchi disc wire.

C — Color of the sea in the Forel scale (3).

Depth — Depth to the bottom, in meters, and after a hyphen, the code number of the method of obtaining the depth.

Code	
1	Depth read from bathymetric chart.
2	Depth measured by sounding lead.
3	Depth measured by echo sounding.

Current — Surface current estimated from the ship's drift. Speed is given in tenths of knots. After a hyphen, direction (true) to which the ship is being set is given in tenths of degrees clockwise from north.

Pl — Method of plankton collection given in the following code:

Code	
1	Vertical haul with Marutoku net.
2	Vertical haul with open net without flowmeter.
3	Vertical haul with closing net.
4	Water sample from Nansen bottle and/or bucket.

La — Method of collection of larvae.

Code	
1	Surface tow.

Remarks — Remarks, in plain language.

REFERENCES

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
1955 International code for radio weather reports from ships. Revised (Effective January 1, 1955). U. S. Government Printing Office, Washington, D. C.: 1-24

CENTRAL METEOROLOGICAL OBSERVATORY, TOKYO, JAPAN
1955 Manual of marine meteorological observations. CMO Press, Tokyo (in Japanese)

KRUMMEL, OTTO
1907 Handbuch der Ozeanographie: Bd. 1, die räumlich, chemischen, und physikalischen Verhältnisse des Meeres. J. Engelhorn, Stuttgart: 1-526

Arrangement of Biological Data

Plankton data are presented in three tables: the first, Table A, deals with quantity of zooplankton; the second, Table B, with kinds of zooplankton; and the third, Table C, with kinds of phytoplankton.

Unfortunately, standardized procedures for collecting plankton material and for treating it in the laboratory were not agreed upon prior to NORPAC. As a result, the data from the various agencies are not always comparable. Subsequent to NORPAC, a proposal was made for standardizing methods and equipment used in collection and measurement of zooplankton material. A brief description of the proposed gear and methods follows.

EQUIPMENT AND PROCEDURES

Net

The proposed specifications of the standard zooplankton net are as follows:

Diameter:	45 cm at mouth
Shape:	conical
Length:	180 cm
Material:	0.33-mm aperture, constructed of grit gauze, bolting silk or nylon
Bucket:	not specified
Flowmeter:	simple, inexpensive, but accurate meter of the Tsurumi or Rigosha type

Collecting Procedures

Method of hauling:	either vertical or oblique
Depth of haul:	from an estimated depth of 150 meters to the surface
Speed of hauling:	approximately one meter per second for vertical hauls; speed not to exceed two meters per second for oblique hauls
Time of hauling:	preferred time for sampling with the standard net is at night, preferably between two hours after sunset and two hours before sunrise

Laboratory Procedures

Laboratory procedures have not been standardized as yet. Most agencies remove larger and adventitious constituents from a plankton sample before determining the quantity of plankton. However, there has not been agreement as to what constitutes a larger organism. Some agencies have considered plankton organisms greater than two cc in bulk and all nekton (fish, squid, etc.) to fall into the category of larger organisms; other agencies have removed organisms such as medusae, salps and pyrosomes, whose longest dimension is greater than one cm.

In determining quantity of zooplankton it has been suggested that wet-weight determinations be made rather than wet volume. If determinations are made on comparably drained samples, the two measurements will be roughly equivalent: one cc of wet plankton will ordinarily weigh approximately one gram. This has been determined by tests made on a number of plankton samples. However, when pteropods, especially Limacina, constitute an important part of the sample, the relationship is less exact; pteropods are heavier for their size than other plankton organisms and as a result one cc of wet plankton will weigh somewhat more than one gram.

The basic problem in "standardizing" determinations of quantity of zooplankton is to standardize the "wetness" of the plankton. Until a comparable standard can be agreed upon, comparison of quantitative measurements of amount of plankton made by different agencies will have limited meaning. Whatever standard "wetness" is agreed upon, it should be used for both volumetric and weight determinations of amount. This problem, as it applies to the NORPAC determinations of quantity, is discussed in a following section.

ZOOPLANKTON, QUANTITY (TABLES A-1 TO A-13)

A variety of gear and methods of hauling were employed on NORPAC.

Gear

The gear can be grouped under six types: (1) 1.0-meter net (mesh opening, 0.65 mm) employed at CCOFI and Hugh M. Smith stations (Tables A-1 to A-3); (2) Clarke-Bumpus net used at Brown Bear stations (Table A-4); Marutoku net or modified Marutoku net employed at Satsuma, Umitaka Maru, Tenyo Maru and Oshoro Maru stations (Tables A-5 to A-8); "O" net used at Yushio Maru, Ryofu Maru and Shumpu Maru stations (A-9 to A-11); Kitahara net employed at Kagoshima Maru and Keiten Maru stations (A-12); and a fine-mesh net used at Oshoro Maru stations (A-13).

Methods of Hauling (see Summary III)

Method of hauling	Type of net	Depth of haul	Table
Oblique tow	1.0 meter	140-0	A-1 to A-3
Oblique tow	Clarke-Bumpus	200-0	A-4
Vertical tow	Marutoku	150-0	A-5 to A-8
Vertical tow	"O"	100-0	A-9
			A-10 (part)
			A-11
Vertical tow	"O"	150-0	A-10 (part)
Vertical tow	Kitahara	100-0	A-12 (part)
Vertical tow	Kitahara	200-0	A-12 (part)
Vertical tow	Fine	50-0	A-13

Quantity Determinations

Three kinds of measurements of quantity are given under "Zooplankton, quantity": wet displacement volumes, settling volumes and wet weight. When the same sample is measured, a settling volume (in cubic centimeters) is larger in quantity than a wet displacement volume or wet weight (in grams). The latter two measurements should be approximately equivalent (i.e., 1 cc = 1 g of plankton) if the plankton is comparable in wetness. (There are some exceptions, i.e., when pteropods are common in a plankton collection.)

Unfortunately, there are varying degrees of wetness associated with the plankton measurements in Table A. Three different techniques were employed in separating the plankton from its preserving liquor: simple draining, suction and blotting. In Tables A-1 through A-3 and also in A-5, A-7 and A-8, displacement volumes were determined after draining. In Table A-4, displacement volumes were determined after suction filtration. Wet-weight determinations were made on blotted specimens; this material was drier than that used for displacement volumes (a larger portion of the water removed) and consequently quantity determinations made by the method of wet weight are systematically lower than displacement volume measurements made on the same samples (Tables A-5, A-7, A-8).

ZOOPLANKTON, KIND (TABLES B-1 TO B-12)

There is less consistency in the tables dealing with "Zooplankton, kind" than those giving "Zooplankton, quantity." Some agencies were interested in counts by major categories (B-3, Hugh M. Smith stations; B-5a, Satsuma stations and B-4, HMCS Ste. Therese stations) or in dominant organisms (B-4, Brown Bear stations). Other agencies have reported zooplankton constituents in more detail.

Only three groups of zooplankton organisms are dealt with at CCOFI stations, and these in detail: euphausiids (B-1), salps and doliolids (B-2).

Most reports by Japanese agencies give the percentage of composition by station of major zooplankton constituents and a list of minor constituents (B-5b, Satsuma stations; B-6a, b, Yushio Maru stations; B-7a, b, Ryofu Maru stations; B-8a, b, Shumpu Maru stations; B-11, Keiten Maru stations; and B-12 Kagoshima Maru stations). Information on zooplankton kind has not been available for other Japanese vessels.

Amounts of zooplankton can be reported as either volume or number. In one table only (B-9, HMCS Ste. Therese stations) are the results given in terms of volume. All other tabulations give number, usually as a percentage figure. Volumetric determinations make it possible to relate directly data in Tables A and B. When the quantity of any organisms in a sample is given in terms of numbers of individuals, it is not possible to relate directly information in Tables A and B.

PHYTOPLANKTON

Except for determinations of chlorophyll a at Brown Bear stations (C-11), no results are reported from the phytoplankton observations made in the eastern North Pacific during NORPAC.

Phytoplankton collections were obtained by most Japanese vessels, usually from surface water samples (C-4 to C-7), and from selected depths as well (C-8, 0-150 m, C-9, 0-100 m and C-10, 0-200 m).

The first three tables deal with phytoplankton and Dinoflagellata taken in net hauls in conjunction with zooplankton samples: Table C-1 from Marutoku net hauls at Satsuma stations; Tables C-2 and C-3 from Kitahara net hauls at Kagoshima Maru and Keiten Maru stations.

In most tables phytoplankton is divided into two major divisions: diatoms and miscellaneous plankton. The latter include other kinds of phytoplankton, as well as Dinoflagellata, Foraminifera, Copepoda, etc.

Institution		Vessel	Dates (1955)	Hydrographic stations (temperature, salinity and oxygen) 0-500 m	500-1000 m	1000-2000 m	2000-3000 m	3000-4000 m	over 4000 m	TOTAL	Number of BT obs.
CCOFI	California Cooperative Oceanic Fisheries Investigations	Horizon	3 viii-8 ix	2	2	21	13	1	2	41	270
		Black Douglas	3 viii-7 ix	1	3	16	12	1	1	34	252
		Stranger	9 viii-21 ix	3	6	19	14	4		46	301
		Spencer F. Baird	8 viii-19 ix		2	20	17	3	1	43	345
		Paolina-T[b]	3-16 viii								84
FFHU	Faculty of Fisheries Hokkaido University	Oshoro Maru	21 vi-29 viii	7	1	29				37	
FFKU	Faculty of Fisheries Kagoshima University	Kagoshima Maru	14 vi-2 viii		7	8				15	
		Keiten Maru	11 vi-18 vii 16-28 viii	9	29					38	
JHO	Japanese Hydrographic Office	Satsuma	2-25 viii		1	45	7			53	123
		No. 4 Kaiyo Maru	11 vii-3 viii	6	16	17				39	
		Meiyo Maru	6-29 vii	6	17	22				45	
JMA	Japan Meteorological Agency	Ryofu Maru	12 viii-24 ix	8	26	41	4			79	197
HMO	Hakodate Marine Observatory	Yushio Maru	11 viii-3 ix	3	3	24	1			31	72
KMO	Kobe Marine Observatory	Shumpu Maru	16 viii-6 ix	5	7	36	1			49	97
NMO	Nagasaki Marine Observatory	Shumpu Maru	8-29 vii	56	21	15				92	125
POFI	Pacific Oceanic Fishery Investigations of the U. S. Fish and Wildlife Service	Hugh M. Smith	16 vii-8 viii		12	62	5			79	303
		John R. Manning[b]									230
POG	Pacific Oceanic Group of the Fisheries Research Board of Canada	HMCS Ste. Therese	26 vii-1 ix	2	83					85	267
TRFRL	Tokai Regional Fisheries Research Laboratory	Tenyo Maru	14 vii-10 ix	5	2	44	2			53	104
TUF	Tokyo University of Fisheries	Umitaka Maru	8 ix-25 x	10	3	44	2			59	141
		Shinyo Maru	16 vii-2 viii 12-16 viii 18-19 ix	5	7					12	45
UW	University of Washington	Brown Bear	1 viii-19 ix	26	1	11	30	2	2	72	268
TOTAL	13	21		152	168	557	108	11	6	1002	3224

a) Current measurements by GEK
b) Bathythermograph measurements taken, but no hydrographic stations
c) Current measurements by two current meters; currents at 10, 50 and 100 m also measured
d) Plankton sample for radioactivity also

Surface temp. underway	PO_4-P	Other chemical measurements	Radioactivity samples (no. of sta.)	Deuterium samples (no. of sta.)	Surface currents	Drift cards and bottles	Frequency of weather obs.
cont. rec.	41		13	3	149[a]	12 bottles	6-hr interval
cont. rec.			8	3	171[a]	each at all	
cont. rec.	34	SiO_2 at 17 sta.	12	3	254[a]	CCOFI sta.	
cont. rec.	39		17	4	245[a]		
hourly	37	SiO_2 at 31 sta. NiO_3 at 17 sta. pH at 37 sta.	37	5			3-hr interval
2-hr interval			10				2-hr interval
4-hr interval							4-hr interval
at sta. and BT	45	pH at 53 sta.	14	9	72[a]		at sta. and BT
at sta.			19		163[a]		at sta.
at sta.			43		132[a]		at sta.
at BT	7	SiO_2 at 3 sta.	7	4	199[a]		3-hr interval
cont. rec.	20		4	4		10 bottles each at 6 sta.	3-hr interval
cont. rec.	45	SiO_2 at 49 sta.	8	4			at sta.
cont. rec.	76	SiO_2 at 92 sta.	6	3		180 bottles	at sta. and BT
cont. rec.			33	15			6-hr interval
or hourly							and each BT
at BT	72		19	10	14		at sta. and BT
cont. rec.	20	pH at 14 sta.	8	9	11[c]	13 sta.	2-hr interval
cont. rec.	59		5	9		20 sta.	3-hr interval
3-hr interval							3-hr interval
cont. rec.	72		24[d]	10			at sta.
or at BT							
	567		287	95	1410		

Agency and ship	TEMPERATURE: Usual number of Nansen bottles	TEMPERATURE: Number of protected thermometers per bottle	TEMPERATURE: Bottles with unprotected thermometers	TEMPERATURE: Estimated error of temperature measurement	SALINITY: Titration	SALINITY: Estimated accuracy of salinity measurement	OXYGEN[a]: Estimated accuracy (ml/L)
CCOFI							
Horizon	17	2	all below 100 m	RMS error, 0.012°C (1)	ashore by the Knudsen-Mohr method	RMS error, 0.02‰ in CCOFI field tests (1)	nominally ±0.02
Stranger	"	"	"	"	"	"	"
Black Douglas	"	"	"	"	"	"	"
Spencer F. Baird	"	"	"	"	"	"	"
POFI							
Hugh M. Smith	13	2	all below 100 m	±0.015°C	ashore (7, 8)	±0.015‰ (lab. test)	nominally ±0.02
UW							
Brown Bear	8[b] (10)	2	all below 200 m	nominally ±0.02°C	ashore[c] (8)	nominally ±0.02‰	nominally ±0.02
POG							
HMCS Ste. Therese	16 (10)	1	all below 300 m	nominally ±0.02°C	ashore by the Knudsen-Mohr method	±0.02‰ in 90% of cases (lab. test)	nominally ±0.02
JHO							
Satsuma	3 to 5	2	all below 100 m	RMS error, 0.015°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
No. 4 Kaiyo Maru	"	"	"	"	"	"	"
Meiyo Maru	"	"	"	"	"	"	"

INORGANIC PHOSPHATE-PHOSPHORUS		OTHER PROPERTIES		METHOD OF PROCESSING THE DATA		
Method of measurement	Estimated accuracy	Method of measurement	Estimated accuracy	Method of depth estimation	Estimated accuracy of accepted depth	Method of interpolation and general description of processing methods
aboard, by spectrophotometer (3)	uncertain, not enough standard			L-Z curves, (5)	nominally ±5 m above 1000 m and 0.5% of wire length below	from characteristic curves against temperature (6)
"	nominally ±5% of concentration	SILICATE-SILICON spectrophotometer (4)	nominally ±5% of concentration	"	"	"
aboard, automatic servo-operated photometer (3)	not usable, data not published			"	"	"
"	uncertain, some values unusually high			"	"	"
				L-Z (9)	nominally ±5 m above 1000 m and 0.5% of wire length below	from characteristic curves against temperature (6)
aboard, spectrophotometer (11, 3)	nominally ±5% of concentration			L-Z (9)	nominally ±5 m above 1000 m and 0.5% of wire length below	from curves against depth (9)
aboard, (12)	"			L-Z (9)	nominally ±5 m above 1000 m and 0.5% of wire length below	from curves against logarithm of depth (13)
aboard, Hehner tubes (12)	nominally ±5% of concentration	pH, colorimeter, McLendon buffer solution, cresol red and thymol blue indicator	nominally ±0.03 units	L-Z (9)	nominally ±5 m above 1000 m and 0.5% of wire length below	from curves against depth (6, 9)
"	"	"	"	"	"	"
"	"	"	"	"	"	"

Summary II, continued

Agency and ship	Usual number of Nansen bottles	TEMPERATURE: Number of protected thermometers per bottle	TEMPERATURE: Bottles with unprotected thermometers	TEMPERATURE: Estimated error of temperature measurement	SALINITY: Titration	SALINITY: Estimated accuracy of salinity measurement	OXYGEN: Estimated accuracy (ml/L)
JMA							
Ryofu Maru	3 to 5	2	all below 150 m	RMS error, 0.015°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
HMO							
Yushio Maru	3 to 5	2	all below 150 m	RMS error, 0.015°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
KMO							
Shumpu Maru	3 to 5	2	all below 150 m	RMS error, 0.015°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
NMO							
Shumpu Maru	3 to 5	1 or 2	all below 150 m	RMS error, 0.015°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
TRFRL							
Tenyo Maru	3 to 5	2	all below 400 m	±0.015°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
FFKU							
Kagoshima Maru	2 to 4	1	0	±0.03°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
Keiten Maru	"	"	"	"	"	"	"

INORGANIC PHOSPHATE-PHOSPHORUS		OTHER PROPERTIES		METHOD OF PROCESSING THE DATA		
Method of measurement	Estimated accuracy	Method of measurement	Estimated accuracy	Method of depth estimation	Estimated accuracy of depth accepted	Method of interpolation and general description of processing methods
aboard, Hehner tubes (12)	±10% but some appear to be higher	TOTAL PHOSPHORUS ashore (15)	nominally ±10% of concentration but some appear too high	(5)	nominally ±5 m above 1000 m and 0.5% of wire length below	linear (16)
		SILICATE-SILICON aboard, photoelectric colorimeter (4)	nominally ±5% of concentration			
aboard, photoelectric colorimeter (3)	±10% but some appear to be higher			(5)	nominally ±5 m above 1000 m and 0.5% of wire length below	linear (16)
aboard, photoelectric colorimeter (3)	±15%	SILICATE-SILICON aboard, Duboscq colorimeter, 10 cm (4)	nominally ±5% of concentration	(5)	nominally ±5 m above 1000 m and 0.5% of wire length below	linear (16)
ashore (12)	questionable, long delay	SILICATE-SILICON aboard, Eggertz tubes (4)	nominally ±5% of concentration	(5)	nominally ±5 m above 1000 m and 0.5% of wire length below	linear (16)
aboard (12)	±15% of concentration	pH, colorimeter, McLendon buffer solution, cresol red and thymol blue indicator	nominally ±0.03 units	L-Z curves below 400 m, wire angle above	nominally ±5 m above 1000 m and 0.5% of wire length below	linear (16)
				wire length and angle	limits of accuracy uncertain	linear (16)
				"	"	"

Summary II, continued

Agency and ship	Usual number of Nansen bottles	TEMPERATURE: Number of protected thermometers per bottle	TEMPERATURE: Bottles with unprotected thermometers	TEMPERATURE: Estimated error of temperature measurement	SALINITY: Titration	SALINITY: Estimated accuracy of salinity measurement	OXYGEN: Estimated accuracy (ml/L)
TUF							
Umitaka Maru	4 to 8	2	all below 150 m	±0.02°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰	±0.03
Shinyo Maru	3 to 4	"	"	"	"	"	"
FFHU							
Oshoro Maru	3 to 6	1 above 100 m, 2 below	all below 200 m	±0.03°C	ashore by the Knudsen-Mohr method with uranin indicator, standard sea water prepared in Japan (14)	±0.020‰ d/	±0.03

a) All oxygen determinations by the Winkler method (see reference 2).
b) Some Fjarlie bottles used at shallow depths.
c) Surface salinity samples titrated at sea.
d) Some evaporation may have occurred in storage; later laboratory tests show a possible maximum loss in weight of 0.2 to 0.4 grams from the 100-cc storage bottles over the maximum storage time (80 days).

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INORGANIC PHOSPHATE-PHOSPHORUS		OTHER PROPERTIES		METHOD OF PROCESSING THE DATA		
Method of measurement	Estimated accuracy	Method of measurement	Estimated accuracy	Method of depth estimation	Estimated accuracy of depth accepted	Method of interpolation and general description of processing methods
aboard (12)	±15% of concentration	SILICATE-SILICON aboard, Eggertz tubes (12)		(5)	nominally ±5 m above 1000 m and 0.5% of wire length below	from curves against depth (6, 9)
"	"	"	"	"	"	"
aboard (12)	these data are published and used in the NORPAC Atlas but have subsequently been reported to be quite seriously in error	SILICATE-SILICON aboard, phototube colorimeter (4)	nominally ±5% of concentration	(5)	nominally ±5 m above 1000 m and 0.5% of wire length below	from curves against depth (6, 9)
		pH, aboard, colorimeter	nominally ±0.03 units			
		NITRATE samples preserved with HCl for future determination				

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SUMMARY III. PLANKTON SAMPLES TAKEN WITH NETS

Name of net	Aperture (mm)	Mouth diameter (cm)	Length (m)	Open or closing	Flow-meter	Shape	Type of haul	Used by	Depth range (m)	No. of hauls	Processing gross amount (weight or volume)	Processing by kind of organism (counts of groups)
CCOFI-POFI	0.55 front 0.25 rear	100	5.0	both	yes	conical	oblique tows at 14 m/min	all CCOFI ships	140-0 280-140 1000-0	225 139 40	displacement volume at each station (Tables A-1 and A-2)	euphausiids (Table B-1) salps and doliolids (Table B-2) fish larvae by 37 categories
				open			oblique tows at about 10 m/min	Hugh M. Smith (POFI)	140-0, less than 140-0	75 48	displacement volume at each station (Table A-3)	group counts for zooplankton and number of fish larvae at each station (Table B-3)
Clarke-Bumpus	0.239	12.5	1.07	open	no	conical	oblique tows at 3.5 kt	Brown Bear (UW)	200-0, less than 200-0 1000-0	58 16 6	displacement volume at each station (Table A-4)	list of dominant zooplankton organisms by eight groups at each station (Table B-4)
Marutoku net	0.33	45	0.80 (straining section)	open	yes	conical	vertical haul at 1.5 m/s	Satsuma (JHO)	150-0	33	wet weight and displacement volume at all stations (Table A-5)	percentages of Copepoda, Radiolaria, Foraminifera, Chaetognatha, Siphonophora, Tunicata, Euphausiacea and miscellaneous at each station (Table B-5) and phytoplankton (Table C-1)
"	"	"	"	"	"	"	"	Ryofu Maru (JMA)	150-0	7		
"	"	"	"	"	"	"	"	Umitaka Maru (TUF)	150-0	59	wet weight at 57 stations (Table A-6)	
"	"	"	"	"	"	"	"	Shinyo Maru (TUF)	150-0	12		
"	"	"	"	"	"	"	vertical haul at 1 m/s	Tenyo Maru (TRFRL)	150-0	53	displacement volume and wet weight for each station (Table A-7)	major organisms in wet weight at each station
"	"	"	"	closing	"	"	"	Tenyo Maru (TRFRL)	25-0 50-25 100-50 150-100	18	wet weight for each each station	major organisms in number for each station

Modified Marutoku	0.33	45	1.65	open	yes[a/]	conical	vertical haul at 1 m/s	Oshoro Maru (FFHU)	150-0	74 (2 per station)	displacement volume and wet weight for 37 stations (Table A-8)	some data reported in 1
"O" net	0.33	36	1.0	open	no	conical with inverted conical front	vertical haul	Shumpu Maru (NMO)	100-0	66		
"	"	"	"	"	"	"	"	Yushio Maru (HMO)	100-0	15	standardized settling volumes at each station (Table A-9)	zooplankton constituents by per cent (Table B-6)
"	"	"	"	"	"	"	"	Ryofu Maru (JMA)	100-0	33	standardized settling volumes at each station (Table A-10)	zooplankton constituents by per cent (Table B-7)
"	"	"	"	"	"	"	"	Shumpu Maru (KMO)	100-0	44	standardized settling volumes at each station (Table A-11)	zooplankton constituents by per cent (Table B-8)
"C" net	0.33	51	1.5	closing	no	conical	vertical haul	Shumpu Maru (NMO)	1300-700	1		
"	"	"	"	"	"	"	"	Shumpu Maru (KMO)	200-100 1000-700 700-500 500-250 250-100	5 2		
POG	0.318	25.4	2.14	closing	no	conical with inverted conical front	vertical haul	HMCS Ste. Therese (POG)	400-0 (by 50- or 100-m increments	85	standardized volume at each station (Table B-9)	percentages of total volume of major groups of plankton organisms for various levels at each station (Table B-9)
Maruchi	0.33	130	4.5	open	no	conical	horizontal tow, 5-12 min at 1 m/s	Umitaka Maru (TUF)	0	29		numbers of fish larvae per 1400 m^3 of surface water are shown in the NORPAC Atlas, Plate 113
"	"	"	"	"	"	"	horizontal tow, 5 min at 1 m/s	Tenyo Maru (TRFRL)	0	68		"

SUMMARY III. PLANKTON SAMPLES TAKEN WITH NETS (Cont.)

Name of net	Aperture (mm)	Mouth diameter (cm)	Length (m)	Open or closing	Flow-meter	Shape	Type of haul	Used by	Depth range (m)	No. of hauls	Processing gross amount (weight or volume)	Processing by kind of organism (counts of groups)
Maruchi	0.36	130	4.5	open	no	conical	horizontal tow, 10 min at 1 m/s	Oshoro Maru (FFHU)	0	70	plankton volume reported in 2, 107-111	numbers of fish larvae per 1400 m^3 of surface water are shown in the NORPAC Atlas, Plate 113; identification of species or group, in 2, 112-115
"	0.33	150	5.0	"	"	"	horizontal tow, 15 min at 1 m/s	Kagoshima Maru (FFKU)	0	15		counts of various fish larvae at 15 stations (Table B-10)
"	"	"	"	"	"	"	"	Keiten Maru (FFKU)	0	10		counts of various fish larvae at 10 stations (Table B-10)
"	"	130	4.5	"	"	"	horizontal tow, 1 hr at 1 m/s	Tenyo Maru (TRFRL)	400	1		
"	"	"	"	closing	"	"	vertical haul	Tenyo Maru (TRFRL)	200-0 600-200 1000-600	2		
Kitahara	0.112	24	0.8 (straining section)	open	no	conical with inverted conical front	vertical haul	Kagoshima Maru (FFKU)	50-0 100-0	34	standardized settling volume and wet weight at 14 stations, 100-0 m (Table A-12)	zooplankton constituents in 22 groups at 14 stations (Table B-12); number of dinoflagellates at 14 stations (Table C-2a); phytoplankton at 14 stations (Table C-3a)
"	"	"	"	"	"	"	"	Keiten Maru (FFKU)	200-0	59	standardized settling volume and wet weight at 31 stations (Table A-12)	zooplankton constituents (Table B-11); number of dinoflagellates (Table C-2b); phytoplankton at 31 stations (Table C-3b)
"	"	"	"	"	yes	"	"	Tenyo Maru (TRFRL)	50-0	53		
Marusho	"	"	"	closing	no	conical	"	Tenyo Maru (TRFRL)	1000-700 700-400 400-150	5		

Twin net	0.33	10	0.5	open	no	square mouth tapering side	vertical haul (hung below bottles on cast)	Oshoro (FFHU)	1000-0 or 500-0	37		some data reported in 1
"N" type high-speed sampler	0.33	mouth 5, cylinder 9.8	0.6	open	yes	stylus	horizontal tow, 1 hr at 5 m/s	Tenyo Maru (TRFRL)	0	68 (2 hrs after sunrise, at noon and at sunset)		
63 x 300 cm net	0.56	63	3.0	closing	no	conical	vertical haul	Oshoro Maru (FFHU)	2000-1000) 1000-500) 500-0)	1		
100 x 350 cm net	0.569	100	3.5	open	no	conical	oblique tow	Brown Bear (UW)	200-0	6		
Handy Underway Plankton Catcher, Model II	0.112	5.0	0.4	open	no	conical	horizontal tow	Oshoro Maru (FFHU)	0	in Bering Sea at each station and morning and evening	quantity reported in 2, 99-105	some data reported in 3
20 x 70 cm net	0.086	20	0.70	open	yes[a/]	conical	vertical haul at 1 m/s	Oshoro Maru (FFHU)	50-0	37	displacement and wet weight from 37 stations (Table A-13)	some data reported in 4; chlorophyll a content at 7 stations reported in 2, 88
17 x 120 cm net	0.062	17	1.20	open	no	truncated cone	vertical haul	Stranger Spencer F. Baird (CCOFI)	50-0	32		

a) Flowmeter fastened on wire above net, used to measure distance of tow.

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SUMMARY IV. PLANKTON FROM WATER SAMPLES

Ship	Surface samples	10-meter samples	Other depths	Results reported
Satsuma (JHO)	25			percentage of diatoms by species at each station (Table C-4)
Shumpu Maru (NMO)	37			percentage of diatoms by species at each station (Table C-5)
Ryofu Maru (JMA)	78			percentage of diatoms by species at each station (Table C-6)
Tenyo Maru (TRFRL)	43			percentage of diatoms by species at 34 stations (Table C-7)
Shumpu Maru (KMO)	63		32 25-170 m	percentage of diatoms by species in 63 surface samples and in 41 groups in 32 samples, 25-170 m (Table C-8)
Yushio Maru (HMO)	55		19 at 50 and 100 m	percentage of diatoms by species at each station (Table C-9)
Oshoro Maru (FFHU)	52		28 10-200 m	percentage of diatoms by species from all samples (Table C-10)
Horizon (CCOFI)		5	7 0-125 m	
Black Douglas "		4	4 "	
Stranger "		5	5 "	
Spencer F. Baird "		5	6 "	
Hugh M. Smith (POFI)			31 0-125 m	
Brown Bear (UW)		24 (phytoplankton) 61 (chlorophyll a) 38 (for light and dark bottles)	10 0-100 m	chlorophyll a (Table C-11)

SUMMARY V. OTHER OBSERVATIONS

Ship	Birds and mammals	Nightlight fishing	Fish observed	Trawls	Dredging and coring	Trolling	Drift net	Longline	Handline	Other
Yushio Maru	at daylight stations									
Ryofu Maru	at daylight stations									
Tenyo Maru	during daylight				1 station		3 stations for salmon	7 stations for salmon	39 stations for salmon	
Umitaka Maru Shinyo Maru	at daylight stations		squid on all night stations					6 night stations 2 night stations		
Horizon Black Douglas Stranger Spencer F. Baird	during daylight	all night stations				during daylight				
Paolina-T	during daylight	15 stations				15 days		15		
Hugh M. Smith	during daylight	19 stations	tuna schools	40 1-hr tows with Isaacs-Kidd 10-ft mid-water trawl		during daylight				
HMCS Ste. Therese	during daylight									
Brown Bear					36 cores 5 clamshell sediment samples					light penetration, 14 stations; transparency, 57 stations
Kagoshima Maru Keiten Maru								during daylight hours in southern region		
Oshoro Maru	during daylight, reported in 1: 131-132				2 dredges in Bristol Bay		7 stations, 44 tans each 12.7-cm mesh, reported in 1: 115-129			light scattering by suspended matter reported in 2: 83-85; light absorption of sea water in situ reported in 2: 86-88

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OBSERVATIONS OF THE CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 31, 1955; 0220 GCT; 45°58'N, 134°22'W; sounding, 2175 fm; wind, 180°, force 5; weather, moderate intermittent rain; sea, rough; wire angle, 13°. 1

0	15.29	32.68	6.28	0.8	0	15.29	32.68	6.28	0.8	24.15	378.0	0.000
10	15.28	32.70	6.33	0.9	10	15.28	32.70	6.33	0.9	24.16	376.3	0.038
24	14.05	32.71	6.91	0.9	20	15.25	32.71	6.39	0.9	24.17	375.7	0.075
53	9.19	32.88	7.03	1.3	30	12.60	32.75	6.99	1.0	24.75	320.4	0.110
67	7.89	32.94	6.88	1.3	50	9.45	32.87	7.02	1.3	25.40	258.3	0.168
80	7.42	32.91	6.98	1.4	75	7.59	32.91	6.95	1.3	25.71	228.7	0.229
103	6.89	32.94	6.91	1.5	100	6.98	32.94	6.92	1.5	25.82	218.2	0.286
126	6.40	32.98	6.88	1.6	150	6.38	33.29	6.77	1.6	26.18	184.0	0.387
154	6.42	33.38	6.32	1.6	200	6.70	33.89	5.10	1.5	26.61	143.7	0.471
204	6.71	33.91	4.94	1.8	250	6.22	33.95	4.09	2.1	26.71	133.9	0.542
270	5.80	33.91	3.86	2.1	300	5.37	33.92	3.47	2.2	26.80	125.3	0.608
368	4.77	33.96	2.54	2.5	400	4.59	33.98	2.20	2.7	26.94	112.0	0.731
488	4.24	34.02	1.36	3.0	500	4.20	34.05	1.25	3.0	27.04	103.2	0.843
651	3.81	34.23	0.65	3.1	600	3.93	34.21	0.75	3.1	27.18	89.3	0.944
870	3.40	34.32	0.42	3.3	700	3.72	34.25	0.54	3.1	27.24	83.8	1.036
1121	2.96	34.46	0.45	3.4	800	3.53	34.29	0.46	3.2	27.29	79.2	1.124
1418	2.48	34.54	0.71	3.1u	1000	3.18	34.40	0.42	3.4	27.42	67.2	1.284
1691	2.14	34.60	1.10	3.0u	1200	2.83	34.48	0.50		27.51	58.3	1.424
1977	1.93	34.69u	1.55	3.0u	1500	2.37	34.56	0.85		27.62	48.1	1.608
2368	1.76	34.65	1.93	3.0u	2000	1.92	34.63	1.65		27.71	39.2	1.869

HORIZON; August 29, 1955; 2145 GCT; 46°00'N, 138°12'W; sounding, 2400 fm; wind, 135°, force 2; weather, cloudy; sea, moderate; wire angle, 04°. 2

0	15.59	32.84	6.32	0.8	0	15.59	32.84	6.32	0.8	24.21	372.2	0.000
10	15.18	32.75	6.36	0.8	10	15.18	32.75	6.36	0.8	24.22	370.8	0.037
25	15.09	32.75	6.38	0.8	20	15.13	32.75	6.37	0.8	24.23	369.8	0.074
55	9.63	32.86	7.11	1.2	30	15.00	32.75	6.38	0.8	24.26	367.2	0.111
71	8.33	32.94	7.00	1.2	50	10.19	32.83	7.10	1.2	25.25	272.6	0.175
86	7.90	32.89	6.92	1.4	75	8.19	32.91	6.98	1.2	25.64	236.0	0.239
111	7.44	-	6.87	1.4	100	7.60	32.90	6.88	1.4	25.70	229.6	0.298
136	7.09	32.99	6.81	1.5	150	6.88	33.14	6.79	1.6	25.99	202.1	0.407
164	6.76	33.33	6.72	1.6	200	6.73	33.61	5.50	1.8	26.38	165.1	0.500
217	6.92	33.75	5.09	1.9	250	6.79	33.89	4.82	2.0	26.59	145.3	0.579
285	6.18	33.93	4.25	2.1	300	5.90	33.92	3.97	2.2	26.74	131.4	0.650
386	4.90	33.91	2.70	2.5	400	4.80	33.92	2.50	2.5	26.86	119.6	0.780
511	4.22	34.04	1.46	2.9	500	4.26	34.01	1.46	2.9	27.00	106.9	0.898
681	3.76	34.19	0.84	3.1	600	3.96	34.12	1.07	3.0	27.12	94.9	1.003
908	3.27	34.36	0.50	3.2	700	3.72	34.21	0.83	3.1	27.21	86.9	1.100
1164	2.90	34.38	0.53	3.2	800	3.48	34.29	0.60	3.2	27.29	78.4	1.188
1473	2.42	34.54	0.73	3.2	1000	3.13	34.37	0.49	3.2	27.39	69.4	1.349
1753	2.11	34.64	1.13	3.2	1200	2.85	34.39	0.55	3.2	27.44	65.2	1.499
2047	1.90	34.65	1.56	3.0r	1500	2.38	34.55	0.77	3.2	27.60	50.0	1.695
2446	1.67	34.69	2.04	3.0	2000	1.93	34.65	1.56	3.2	27.72	38.1	1.957

3 HORIZON; August 28, 1955; 1650 GCT; 45°57'N, 142°16'W; sounding, 2480 fm; wind, 115°, force 3; weather, cloudy; sea, moderate; wire angle, 09°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	14.10	32.75	6.51	0.8	0	14.10	32.75	6.51	0.8	24.45	349.0	0.000
10	14.08	32.75	6.63	0.8	10	14.08	32.75	6.63	0.8	24.46	348.3	0.035
25	13.53	32.75	6.72	0.8	20	13.88	32.75	6.68	0.8	24.50	344.1	0.070
55	8.22	32.97	7.03	1.4	30	12.63	32.77	6.80	0.8	24.76	319.5	0.103
69	7.95	33.08	7.00	1.4	50	8.70	32.93	7.01	1.4	25.57	242.1	0.159
83	7.34	33.00	7.00	1.5	75	7.70	33.05	7.00	1.4	25.81	219.3	0.217
109	6.99	32.99	7.03	1.4	100	7.10	32.99	7.01	1.4	25.85	216.1	0.272
132	6.67	33.35	6.61	1.5	150	6.73	33.55	6.38	1.6	26.33	169.8	0.369
162	6.78	33.69	6.25	1.6	200	6.60	33.82	5.81	1.7	26.57	147.9	0.450
215	6.44	33.84	5.53	1.7	250	5.95	33.88	4.70	1.9	26.70	135.3	0.522
281	5.55	33.89	4.10	2.1	300	5.38	33.89	3.80	2.2	26.78	127.3	0.590
382	4.66	33.91	2.50	2.7	400	4.58	33.92	2.34	2.7	26.89	117.1	0.716
506	4.17	34.04	1.55	2.8	500	4.19	34.03	1.57	2.8	27.02	104.5	0.832
672	3.71	34.25	0.78	3.0	600	3.90	34.15	1.11	2.9	27.15	92.8	0.935
897	3.20	34.34	0.52	3.2	700	3.64	34.26	0.72	3.0	27.26	82.0	1.028
1152	2.71	34.42	0.48	3.3	800	3.41	34.31	0.59	3.1	27.32	76.6	1.113
1458	2.36	34.48	0.68	3.2	1000	2.99	34.38	0.49	3.3	27.42	67.2	1.270
1739	2.12	34.56	1.04	3.1	1200	2.65	34.43	0.51	3.3	27.49	60.0	1.410
2037a)	1.94	34.61	1.44	3.1u	1500	2.32	34.50	0.80	3.2	27.58	52.2	1.601
2437b)	1.77	34.65	1.84	3.1u	2000	1.96	34.60	1.40		27.68	42.3	1.878

4 HORIZON; August 27, 1955; 2317 GCT; 45°59'N, 146°10'W; sounding, 2630 fm; wind, 090°, force 4; weather, overcast; sea, moderate; wire angle, 18°.

0	14.60	32.90	6.60	0.9	0	14.60	32.90	6.60	0.9	24.46	348.0	0.000
9	14.58	32.88	6.47	1.0	10	14.58	32.88	6.47	1.0	24.45	348.6	0.035
23	14.33	32.94	6.49	1.0	20	14.41	32.92	6.47	1.0	24.52	342.4	0.069
51	8.71	33.10	7.48	1.2	30	13.30	32.96	6.68	1.0	24.78	317.8	0.103
64	8.62	33.11	7.50	1.4	50	8.80	33.10	7.45	1.2	25.69	231.4	0.158
79	7.54	33.10	7.11	1.4	75	7.80	33.10	7.17	1.4	25.84	217.0	0.214
100	7.19	33.14	7.16	1.5	100	7.19	33.14	7.16	1.5	25.96	205.7	0.267
125	7.01	33.29	6.84	1.4	150	6.79	33.58	6.60	1.5	26.36	167.8	0.362
152	6.77	33.63	6.54	1.5	200	6.59	33.85	5.99	1.6	26.60	145.0	0.441
204	6.56	33.86	5.87	1.6	250	6.15	33.90	5.09	1.8	26.69	136.2	0.513
270	5.92	33.92	4.62	2.0	300	5.55	33.93	4.00	2.2	26.79	126.9	0.581
368	4.77	33.95	2.75	2.4	400	4.56	33.99	2.35	2.5	26.95	111.5	0.704
489	4.14	34.09	1.51	2.8	500	4.12	34.10	1.48	2.8	27.08	99.1	0.813
652	3.74	34.20	0.98	2.9	600	3.87	34.15	1.15	2.9	27.17	93.0	0.914
873	3.25	34.38	0.58	3.1	700	3.63	34.23	0.86	2.9	27.24	84.0	1.008
1123	2.76	34.43	0.51	3.1	800	3.41	34.35	0.62	3.1	27.35	73.7	1.093
1431	2.42	34.52	0.57	3.2	1000	2.99	34.40	0.51	3.1	27.43	65.9	1.245
					1200	2.66	34.45	0.52	3.1	27.49	59.8	1.385

a) Alternate depth of 1989 meters rejected.
b) Alternate depth of 2318 meters rejected.

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	
HORIZON; August 27, 1955; 0407, 0431, 0536 GCT; 46°00'N, 150°01'W; sounding, 2825 fm; wind, 090°, force 3; weather, overcast; sea, moderate; wire angle, 04°, missing, 09°.													5
0	14.47	33.02	5.03u	0.9	0	14.47	33.02	(6.55)	0.9	24.58	337.0	0.000	
10	14.34	32.97	6.57	0.8	10	14.34	32.97	6.57	0.8	24.58	337.1	0.034	
25	13.98	32.98	6.59	0.9	20	14.13	32.98	6.58	0.9	24.62	332.7	0.067	
55	8.06	33.10	7.49	1.3	30	13.81	32.99	6.60	0.9	24.70	325.5	0.100	
70	7.56	33.10	7.23	1.4	50	8.60	33.10	7.47	1.3	25.71	228.7	0.156	
86	7.16	33.11	7.23	1.4	75	7.42	33.10	7.22	1.4	25.89	212.2	0.211	
111	6.70	33.16	7.27	1.4	100	6.84	33.13	7.26	1.4	25.99	202.1	0.263	
					150	6.40	33.57	6.80	1.4	26.40	163.8	0.356	
134	6.44	33.24	6.94	1.4	200	6.37	33.81	5.79	1.6	26.59	145.5	0.434	
165	6.35	33.69	6.42	1.6	250	5.76	33.88	4.98	1.7	26.72	133.1	0.506	
219	6.12	33.84	5.53	1.6	300	5.18	33.98	3.61	1.9	26.87	118.9	0.570	
284	5.34	33.95	4.08	1.8	400	4.48	34.05	2.00	2.7	27.00	106.3	0.687	
387	4.54	34.04	2.02	2.5	500	4.18	34.10	1.68	2.8	27.08	99.2	0.794	
513	4.03	34.14	1.57	2.8	600	3.83	34.23	1.37	2.9	27.22	85.9	0.891	
680	3.65	34.26	1.16	2.9	700	3.61	34.27	1.15	2.9	27.27	81.2	0.980	
907	3.16	34.34	0.74	3.0	800	3.38	34.30	0.94	2.9	27.31	77.0	1.065	
1154	2.69	34.47	0.68u	3.1	1000	2.97	34.40	0.62	3.1	27.43	65.8	1.220	
1473	2.32	34.54	0.62	3.2u	1200	2.62	34.50	0.55	3.1	27.54	55.3	1.355	
					1500	2.29	34.55	0.64	3.1	27.61	48.9	1.534	
1063	2.88	34.41	0.52u	2.6	2000	1.94	34.63	1.58	2.8	27.70	40.0	1.798	
1304	2.50	34.52	0.55	2.5	2500	1.70	34.66	2.15	2.6	27.75	35.6	2.032	
1650	2.15	34.57	0.85	2.5	3000	1.54	34.69	2.80	2.5	27.78	32.8	2.249	
2430	1.73	34.66	2.04	2.6r	4000	1.50	34.72	3.47	2.5	27.80	30.9	2.673	
2917	1.56	34.69	2.67	2.5	5000	(1.57)	(34.72)	(3.67)	(2.5)	(27.79)	(31.8)	(3.121)	
3401	1.52	34.69	3.16	3.1									
3882	1.50	34.72	3.46	3.1									
4363	1.52	34.70	3.51	3.0									
4850	1.56	34.70	3.63	2.7									
4948	1.56	34.71	3.67	2.7r									
HORIZON; September 2, 1955; 0859 GCT; 48°11'N, 125°05'W; sounding, 63 fm; wind, calm; weather, fog in patches; sea, moderate; wire angle, 09°.													6
0	12.73	31.10	6.31	1.8	0	12.73	31.10	6.31	1.8	23.45	444.4	0.000	
10	10.99	31.78	6.33	1.6	10	10.99	31.78	6.33	1.6	24.30	363.7	0.040	
20	8.46	32.52	3.93	2.2	20	8.46	32.52	3.93	2.2	25.28	270.0	0.072	
30	7.43	32.77	4.16	2.1	30	7.43	32.77	4.16	2.1	25.63	237.0	0.097	
40	7.14	33.00	3.87	2.2	50	6.98	33.18	2.91	2.5	26.01	200.6	0.141	
49	6.98	33.17	2.91	2.5	75	6.78	33.55	2.33	2.7	26.32	170.7	0.188	
60	6.93	33.40	2.53	2.6	100	(6.4)							
70	6.82	33.49	2.34	2.7									
79	6.74	33.58	2.31	2.7									
89	6.70	33.77	2.52u	2.6u									
HORIZON; September 2, 1955; 0335 GCT; 47°55'N, 126°04'W; sounding, 910 fm; wind, 210°, force 2; weather, overcast; sea, rough; wire angle, 05°.													7
0	16.21	32.04	6.17	0.5	0	16.21	32.04	6.17	0.5	23.45	444.7	0.000	
10	15.94	32.14	6.18	0.5	10	15.94	32.14	6.18	0.5	23.59	431.3	0.044	
25	15.05	32.14	6.35	0.6	20	15.50	32.14	6.25	0.5	23.68	422.5	0.087	
54	7.97	32.54	6.61	1.3	30	13.40	32.19	6.50	0.8	24.16	376.7	0.127	
68	7.14	32.66	6.58	1.5	50	8.80	32.49	6.60	1.2	25.21	276.7	0.192	
84	6.97	32.90	5.60	1.8	75	7.00	32.73	6.10	1.6	25.66	234.2	0.256	
108	7.14	33.49	3.86	2.1	100	7.08	33.34	4.70	2.0	26.13	189.2	0.309	
133	7.17	33.78	3.15	2.3	150	7.03	33.90	2.85	2.4	26.57	147.7	0.395	
162	6.82	33.93	2.52	2.5	200	6.40	33.97	1.95	2.6	26.71	134.3	0.466	
214	6.26	33.98	1.92	2.6	250	6.05	34.01	2.00	2.7	26.79	127.0	0.533	
283	5.91	34.04	2.04	2.7	300	5.84	34.04	2.03	2.7	26.84	121.8	0.597	
384	5.54	34.02	1.42	3.0	400	5.48	34.02	1.42	3.0	26.87	119.4	0.722	
511	4.91	34.13	0.96	3.1	500	4.97	34.12	1.00	3.1	27.00	106.8	0.841	
680	4.28	34.22	0.47	3.3	600	4.54	34.18	0.65	3.2	27.10	96.9	0.949	
908	3.74	34.36	0.38	3.4	700	4.23	34.23	0.45	3.3	27.17	90.3	1.049	
1166	3.16	34.45	0.46	3.4	800	3.99	34.30	0.38	3.4	27.25	83.0	1.142	
1476	2.58	34.53	0.85	3.3	1000	3.53	34.40	0.39	3.4	27.38	70.4	1.310	
					1200	3.09	34.46	0.50	3.4	27.47	62.1	1.459	
					1500	(2.54)	(34.53)	(0.90)	(3.3)	(27.58)	(51.4)	(1.654)	

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
8	HORIZON; September 1, 1955; 2239 GCT; 47°36'N, 126°59'W; sounding, 1700 fm; wind, 180°, force 3; weather, overcast; sea, rough; wire angle, 18°.											
0	15.57	32.07	6.30	0.6	0	15.57	32.07	6.30	0.6	23.62	428.3	0.000
9	15.48	32.05	6.45	0.6	10	15.48	32.05	6.45	0.6	23.62	428.6	0.043
23	12.71	32.20	6.58	0.9	20	15.00	32.16	6.54	0.7	23.81	410.3	0.085
52	7.75	32.54	6.65	1.2	30	10.70	32.29	6.61	1.0	24.74	321.4	0.121
65	7.45	32.66	6.37	1.4	50	7.80	32.52	6.65	1.2	25.38	260.9	0.180
79	7.30	32.97	5.43	1.6	75	7.36	33.08	5.75	1.5	25.89	211.7	0.239
102	7.31	33.46	4.07	2.0	100	7.31	33.44	4.15	2.0	26.17	185.3	0.289
124	7.26	33.69	3.42	2.2	150	7.13	33.86	3.12	2.4	26.52	151.9	0.375
151	7.12	33.86	3.10	2.4	200	6.49	33.99	2.64	2.4	26.72	133.5	0.447
201	6.48	33.99	2.63	2.4	250	6.10	34.01	2.11	2.8	26.78	127.2	0.514
264	6.00	34.02	2.01	2.9	300	5.72	34.03	1.83	2.9	26.85	121.0	0.578
361	5.30	34.07	1.62	2.9	400	5.11	34.09	1.36	2.9	26.96	110.8	0.698
478	4.82	34.14	0.90	3.0	500	4.72	34.15	0.80	3.0	27.06	101.1	0.809
641	4.26	34.22	0.51	3.4	600	4.39	34.20	0.58	3.3	27.14	93.4	0.912
858	3.70	34.38	0.30	3.5	700	4.10	34.26	0.43	3.5	27.21	87.0	1.008
1105	3.13	34.49	0.45	3.5	800	3.84	34.33	0.31	3.5	27.29	79.0	1.098
1408	2.62	34.57	0.81	3.4	1000	3.37	34.44	0.37	3.5	27.43	65.8	1.257
					1200	2.96	34.52	0.57	3.5	27.53	56.9	1.397
9	HORIZON; September 1, 1955; 1403 GCT; 46°56'N, 128°40'W; sounding, 1510 fm; wind, 200°, force 4; weather, light fog; sea, rough; wire angle, 17°.											
0	15.39	32.29	6.17	0.6	0	15.39	32.29	6.17	0.6	23.82	408.9	0.000
10	15.38	32.28	6.22	0.6	10	15.38	32.28	6.22	0.6	23.82	409.6	0.041
24	12.17	32.54	7.45	1.1	20	12.90	32.51	7.31	1.0	24.51	343.3	0.078
52	7.79	32.66	7.01	1.2	30	10.80	32.56	7.38	1.1	24.93	302.9	0.111
66	7.54	33.74	7.00	1.4	50	7.82	32.66	7.02	1.2	25.48	250.7	0.166
80	7.38	32.76	7.00	1.4	75	7.43	32.75	7.00	1.4	25.61	238.6	0.228
103	6.94	32.83	6.76	1.5	100	6.99	32.82	6.85	1.4	25.73	227.2	0.286
128	6.85	33.28	5.84	1.7	150	7.09	33.60	4.00	2.3	26.32	171.2	0.387
155	7.08	33.67	3.46	2.4	200	6.79	33.84	2.88	2.5	26.56	148.7	0.468
207	6.66	33.87	2.76	2.5	250	6.28	33.93	2.25	2.6	26.70	135.5	0.540
271	6.14	33.96	2.10	2.7	300	5.95	34.01	1.80	2.8	26.80	125.3	0.607
360	5.58	34.04	1.36	2.9	400	5.33	34.05	1.13	3.0	26.92	114.6	0.732
492	4.85	34.09	0.72	3.1	500	4.79	34.10	0.65	3.1	27.01	105.8	0.847
656	4.20	34.22	0.23	3.3	600	4.38	34.18	0.25	3.2	27.12	95.6	0.953
877	3.66	34.33	0.38	3.7	700	4.08	34.24	0.25	3.4	27.20	88.1	1.051
1127	3.06	34.45	0.45	3.6	800	3.84	34.30	0.35	3.7	27.29	81.8	1.142
1426	2.58	34.56	0.80	3.4	1000	3.36	34.39	0.40	3.7	27.38	70.2	1.308
1700	2.16	34.62	1.13	3.2	1200	2.93	34.48	0.53	3.6	27.49	59.8	1.453
1995	1.93	34.60u	1.59	3.1	1500	2.47	34.59	0.89	3.3	27.64	46.5	1.638
2391	1.76	34.63	1.99	3.2u	2000	1.93	34.63	1.59	3.1	27.71	39.4	1.897
10	HORIZON; September 1, 1955; 0429 GCT; 46°15'N, 130°19'W; sounding, 900 fm; wind, 180°, force 3; weather, fog, sky discernible; sea, moderate; wire angle, 22°.											
0	16.11	32.79	6.17	0.7	0	16.11	32.79	6.17	0.7	24.05	386.8	0.000
9	15.66	32.79	6.22	0.8	10	15.65	32.79	6.22	0.8	24.15	377.5	0.038
23	15.38	32.79	6.24	0.8	20	15.43	32.79	6.23	0.8	24.19	373.7	0.076
52	9.06	32.74	7.15	1.1	30	15.10	32.79	6.27	0.8	24.26	367.2	0.113
65	8.43	32.77	7.03	1.2	50	9.70	32.74	7.11	1.0	25.26	271.9	0.177
79	7.98	32.81	6.93	1.3	75	8.08	32.80	7.01	1.3	25.56	243.5	0.242
102	7.35	32.88	6.54	1.5	100	7.40	32.87	6.60	1.5	25.71	228.9	0.301
124	7.07	33.19	5.72	1.7	150	7.10	33.53	4.89	1.9	26.28	175.4	0.403
150	7.10	33.53	4.89	1.9	200	6.98	33.84	3.88	2.0	26.53	151.0	0.486
200	6.98	33.84	3.88	2.0	250	6.20	33.88	3.52	2.2	26.67	138.2	0.560
261	6.01	33.89	3.46	2.2	300	5.50	33.92	3.14	2.4	26.78	127.5	0.628
355	5.00	33.95	2.34	2.8	400	4.71	33.99	1.80	2.9	26.92	114.0	0.753
471	4.41	34.04	1.28	3.0	500	4.32	34.08	1.06	3.1	27.04	102.5	0.866
628	4.00	34.18	0.60	3.3	600	4.06	34.16	0.66	3.3	27.14	93.9	0.969
842	3.59	34.36	0.32	3.2u	700	3.86	34.25	0.40	3.3	27.23	85.3	1.064
1088	3.12	34.45	0.42	3.3	800	3.67	34.33	0.32	3.3	27.31	77.2	1.151
1390	2.56	34.52	0.72	3.2	1000	3.29	34.41	0.37	3.3	27.41	67.8	1.310
					1200	2.90	34.48	0.56	3.3	27.50	59.2	1.452

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 31, 1955; 1845, 1929 GCT; 45°33'N, 131°59'W; sounding, 1850 fm; wind, 200°, force 2; weather, cloudy; sea, moderate; wire angle, 10°, 13°. 11

0	15.94	32.81	6.05	0.7	0	15.94	32.81	6.05	0.7	24.10	382.3	0.000
10	15.80	32.79	6.14	0.7	10	15.80	32.79	6.14	0.7	24.12	380.9	0.038
25	15.14	32.76	6.31	0.7	20	15.53	32.77	6.23	0.7	24.16	376.7	0.076
55	8.33	32.74	6.95	1.2	30	13.24	32.75	6.55	0.8	24.63	332.0	0.112
64	8.14	32.78	6.84	1.2	50	8.72	32.74	6.94	1.2	25.41	257.4	0.171
73	7.86	32.81	6.64	1.3	75	7.81	32.82	6.63	1.3	25.61	238.6	0.233
87	7.61	32.84	6.64	1.3	100	7.40	32.89	6.52	1.4	25.73	227.4	0.291
106	7.34	32.91	6.46	1.5	150	7.35	33.58	4.46	1.5	26.28	175.4	0.393
131	7.18	33.26	5.57	1.7	200	6.99	33.89	3.21	2.3	26.57	147.1	0.475
159	7.26	33.67	4.11	2.0	250	6.48	33.97	2.60	2.5	26.70	135.3	0.548
211	6.86	33.95	2.98	2.4	300	6.00	33.99	2.21	2.6	26.78	127.2	0.615
285	6.14	33.99	2.31	2.6	400	5.30	34.04	1.50	2.9	26.90	115.7	0.741
390	5.37	34.03	1.60	2.9	500	4.86	34.11	0.90	3.0	27.01	106.1	0.857
530	4.74	34.13	0.86	3.1	600	4.50	34.17	0.60	3.2	27.10	97.2	0.964
721	4.18	34.24	0.40	3.3	700	4.24	34.23	0.41	3.3	27.18	89.8	1.064
					800	3.97	34.31	0.35	3.4	27.27	81.2	1.156
477	4.98	34.09	0.95	3.0	1000	3.45	34.41	0.33	3.4	27.39	69.4	1.321
647	4.36	34.21	-	3.2	1200	3.02	34.45	0.45	3.4	27.47	62.0	1.469
811	3.93	34.33	0.33	3.2u	1500	2.43	34.53	0.82	3.4	27.58	51.8	1.664
1052	3.33	34.42	0.33	3.4	2000	1.95	34.65	1.55	3.2	27.72	38.0	1.931
1291	2.83	34.33r	0.97r	3.4	2500	1.78	34.66	2.05	3.0	27.74	36.5	2.164
1626	2.22	34.60	0.99	3.3	3000	1.61	34.70	2.51	2.9	27.78	32.8	2.388
2007	1.94	34.66u	1.58	3.2								
2392	1.82	34.65	1.94	3.0								
2878	1.64	34.69	2.51	2.9								
3270	1.54	34.72	2.50	2.9u								

HORIZON; August 31, 1955; 1037 GCT; 44°54'N, 133°31'W; sounding, 2100 fm; wind, 220°, force 3; weather, partly cloudy; sea, rough; wire angle, 03°. 12

0	15.64	32.73	6.25	0.8	0	15.64	32.73	6.25	0.8	24.11	381.8	0.000
10	15.62	32.68	6.15	0.9	10	15.62	32.68	6.15	0.9	24.07	385.0	0.038
25	13.85	32.75	6.86	0.9	20	15.58	32.67	6.15	0.9	24.08	384.1	0.077
55	8.40	32.91	6.98	1.2	30	12.48	32.80	6.92	0.9	24.81	314.9	0.112
70	8.07	32.93	6.86	1.3	50	8.68	32.91	6.98	1.2	25.55	244.6	0.168
85	7.86	32.92	6.68	1.3	75	8.00	32.93	6.71	1.3	25.67	232.8	0.228
108	7.43	32.88	6.88	1.4	100	7.60	32.89	6.83	1.3	25.70	230.0	0.286
133	6.98	32.89	6.73	1.5	150	6.74	33.02	6.48	1.6	25.92	208.9	0.397
162	6.62	33.16	6.27	1.7	200	6.68	33.64	5.50	1.8	26.41	162.8	0.491
216	6.72	33.77	5.33	1.8	250	6.42	33.85	4.60	2.0	26.61	143.8	0.569
283	6.02	33.92	3.99	2.1	300	5.80	33.95	3.67	2.2	26.78	128.0	0.639
385	4.68	34.10	2.34	2.7	400	4.60	34.11	2.10	2.8	27.03	103.5	0.758
511	4.29	34.12	0.92	3.1	500	4.32	34.12	1.02	3.0	27.07	99.8	0.864
661p	3.80	34.23	0.31	3.2	600	3.98	34.17	0.45	3.2	27.14	92.8	0.965
852p	3.44	34.35	0.37	3.4	700	3.73	34.25	0.32	3.2	27.24	84.2	1.059
1062p	2.96	34.42	-	3.3	800	3.54	34.33	0.34	3.4	27.33	75.9	1.145
1317p	2.66	34.53	-	3.3	1000	3.10	34.40		3.3	27.42	66.8	1.301
					1200	2.78	34.47		3.3	27.51	58.6	1.441

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
13	HORIZON; August 30, 1955; 1048 GCT; 44°15'N, 136°45'W; sounding, 2250 fm; wind, 170°, force 5; weather, rain; sea, moderate; wire angle, 18°.											
0	16.16	32.93	6.21	0.8	0	16.16	32.93	6.21	0.8	24.15	377.8	0.000
9	16.13	32.95	6.20	0.8	10	16.10	32.95	6.18	0.8	24.17	375.4	0.038
23	16.00	32.92	6.15	0.8	20	16.03	32.92	6.15	0.8	24.17	375.8	0.075
52	10.32	33.05	7.13	1.0	30	15.30	32.93	6.20	0.8	24.33	360.4	0.112
67	9.33	33.10	7.00	1.0	50	11.00	33.02	7.04	1.0	25.27	271.0	0.176
81	9.12	33.09	6.88	1.1	75	9.20	33.10	6.89	1.0	25.62	237.9	0.240
104	8.52	33.03	6.70	1.2	100	8.58	33.03	6.72	1.2	25.67	233.2	0.299
126	8.39	33.12	6.60	1.3	150	7.89	33.34	6.20	1.4	26.01	200.4	0.409
155	7.80	33.39	6.11	1.4	200	7.58	33.78	5.70	1.5	26.40	163.7	0.501
206	7.54	33.82	5.57	1.6	250	7.20	33.96	4.82	1.9	26.60	145.1	0.580
271	7.01	33.98	4.49	2.0	300	6.60	33.97	4.06	2.1	26.69	136.2	0.653
369	5.43	33.94	3.16	2.4	400	5.14	33.95	2.82	2.5	26.86	120.1	0.785
490	4.49	34.02	1.76	2.9	500	4.44	34.03	1.63	2.9	26.99	107.4	0.904
653	3.88	34.16	0.81	3.2	600	4.05	34.12	1.07	3.1	27.11	96.3	1.011
873	3.34	34.35	0.42	3.3	700	3.76	34.22	0.68	3.2	27.22	86.1	1.108
1124	2.96	34.44	0.36	3.4	800	3.50	34.30	0.51	3.3	27.30	77.8	1.196
1430	2.50	34.53	0.70	3.4	1000	3.14	34.40	0.37	3.4	27.42	67.0	1.354
					1200	2.85	34.46	0.40	3.4	27.50	59.7	1.496
14	HORIZON; August 29, 1955; 0646 GCT; 44°15'N, 140°31'W; sounding, 2450 fm; wind, 090°, force 4; weather, cloudy; sea, moderate; wire angle, 32°.											
0	15.83	32.97	6.11	0.7	0	15.83	32.97	6.11	0.7	24.24	368.7	0.000
8	15.80	32.96	6.27	0.8	10	15.80	32.96	6.24	0.8	24.25	368.6	0.037
21	15.80	32.95	6.21	0.8	20	15.80	32.95	6.22	0.8	24.24	369.2	0.074
47	11.16	33.04	7.37	0.9	30	14.74	32.96	6.45	0.8	24.48	346.2	0.110
60	9.88	33.18	7.25	1.1	50	10.80	33.09	7.35	0.9	25.35	263.5	0.171
71	9.07	33.10	7.02	1.2	75	8.98	33.11	7.00	1.2	25.67	232.8	0.233
92	8.74	33.15	6.70	1.3	100	8.63	33.17	6.73	1.3	25.76	224.0	0.291
112	8.47	33.19	6.78	1.3	150	7.72	33.44	6.41	1.5	26.11	190.7	0.396
135	7.92	33.32	6.54	1.5	200	7.40	33.80	6.00	1.5	26.44	160.0	0.485
178	7.48	33.68	6.24	1.5	250	7.09	33.91	5.30	1.7	26.57	147.7	0.563
234	7.25	33.89	5.57	1.6	300	6.32	33.92	4.35	2.0	26.68	136.8	0.636
315	6.07	33.92	4.12	2.1	400	5.00	33.94	2.88	2.6	26.86	120.0	0.768
417	4.88	33.95	2.69	2.7	500	4.41	34.03	1.92	2.9	27.00	107.0	0.886
558	4.21	34.08	1.50	3.0	600	4.08	34.11	1.32	3.1	27.09	97.8	0.994
747	3.67	34.20	0.77	3.3	700	3.79	34.17	0.92	3.2	27.17	90.6	1.094
966	3.14	34.34	0.52	3.3	800	3.54	34.24	0.72	3.3	27.24	83.9	1.188
1242	2.76	34.43	0.38	3.3	1000	3.08	34.35	0.50	3.3	27.38	70.4	1.355
					1200	2.82	34.41	0.38	3.3	27.45	64.0	1.504
15	HORIZON; August 16, 1955; 0680 GCT; 46°03'N, 125°09'W; sounding, 800 fm; wind, 360°, force 3; weather, overcast; sea, rough; wire angle, 09°.											
0	15.94	31.23	5.87	0.5	0	15.94	31.23	5.87	0.5	22.89	498.0	0.000
10	15.28	31.92	5.97	0.5	10	15.28	31.92	5.97	0.5	23.56	433.9	0.047
25	12.26	32.51	6.90	0.7	20	13.30	32.45	6.62	0.6	24.38	355.7	0.086
49	8.64	32.66	6.95	0.8	30	11.10	32.59	6.93	0.7	24.90	306.0	0.119
65	7.85	32.68	6.84	1.0	50	8.60	32.66	6.94	0.8	25.37	261.4	0.176
78	7.64	32.72	6.66	1.2	75	7.70	32.71	6.67	1.1	25.55	244.7	0.240
97	7.40	32.91	5.84	1.5	100	7.39	32.99	5.70	1.5	25.81	219.6	0.298
121	7.28	33.40	4.45	1.7	150	7.23	33.84	3.04	2.1	26.50	154.0	0.393
151	7.21	33.85	3.12	2.1	200	6.67	34.01	2.01	2.3	26.70	134.7	0.466
198	6.68	34.00	2.02	2.3	250	6.21	34.06	1.95	2.3	26.80	125.2	0.533
260	6.14	34.07	1.91	2.3	300	5.97	34.08	1.49	2.4	26.86	119.9	0.596
349	5.76	34.09	1.18	2.7	400	5.53	34.11	0.98	2.8	26.94	112.8	0.717
463	5.07	34.15	0.60	3.0	500	4.90	34.23	0.45	3.0	27.10	97.3	0.828
614	4.64	34.30	0.28	3.1	600	4.67	34.29	0.30	3.1	27.18	90.1	0.927
828	4.18	34.36	0.16	3.2	700	4.46	34.32	0.20	3.1	27.22	85.8	1.022
1072	3.46	34.47	0.16	3.2	800	4.25	34.35	0.17	3.2	27.26	81.6	1.112
1372	2.76	34.60	0.43	3.2	1000	3.68	34.43	0.16	3.2	27.39	70.0	1.279
					1200	3.14	34.53	0.27	3.2	27.52	57.5	1.423

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 16, 1955; 1339 GCT; 45°42'N, 125°59'W; sounding, 1425 fm; wind, 340°, force 4; weather, intermittent drizzle; sea, rough; wire angle, 16°. 16

0	15.75	30.75	5.94	0.5	0	15.75	30.75	5.94	0.5	22.56	529.4	0.000
9	15.74	30.79	5.23r	0.4	10	15.73	30.80	5.94	0.4	22.60	525.2	0.053
23	13.50	32.35	6.70	0.5	20	14.47	31.90	6.33	0.5	23.73	418.1	0.100
52	8.96	32.81	6.74	0.9	30	11.20	32.52	6.69	0.7	24.83	312.9	0.137
66	8.02	32.69	6.96	1.0	50	9.09	32.79	6.73	0.9	25.40	258.7	0.194
79	7.41	32.69	6.99	1.2	75	7.54	32.69	7.00	1.2	25.55	244.6	0.257
102	7.10	32.72	6.78	1.2	100	7.10	32.71	6.80	1.2	25.63	236.8	0.318
125	7.34	33.22	5.11	1.6	150	7.36	33.68	4.15	1.9	26.35	168.0	0.420
152	7.38	33.71	4.03	1.9	200	6.99	33.91	3.12	2.0	26.59	145.9	0.500
201	6.98	33.91	3.12	2.0	250	6.30	33.94	2.53	2.2	26.70	134.9	0.572
264	6.17	33.95	2.36	2.2	300	5.88	33.99	1.84	2.4	26.80	126.1	0.639
359	5.56	34.04	1.12	2.6	400	5.38	34.06	1.05	2.6	26.91	115.4	0.764
478	5.05	34.08	0.94	2.6	500	4.94	34.09	0.87	2.6	26.98	108.8	0.881
639	4.28	34.22	0.48	2.8	600	4.44	34.17	0.59	2.7	27.09	97.7	0.990
857	3.86	34.42	0.28	3.1	700	4.14	34.31	0.35	2.8	27.25	83.2	1.086
1107	3.20	34.46	0.35	3.2	800	3.97	34.40	0.30	3.0	27.34	74.7	1.172
1411	2.64	34.52	0.67	3.0	1000	3.49	34.44	0.32	3.2	27.42	66.7	1.328
					1200	3.02	34.48	0.45	3.2	27.49	60.1	1.470

HORIZON; August 16, 1955; 2125, 2221, 2325 GCT; 45°08'N, 127°22'W; sounding, 1600 fm; wind, 310°, force 2; weather, cloudy; sea, slight; wire angle, 04°, 21°, 21°. 17

0	15.74	32.01	6.08	0.5	0	15.74	32.01	6.08	0.5	23.53	436.7	0.000
10	15.54	31.99	5.97	0.5	10	15.54	31.99	5.97	0.5	23.56	433.9	0.044
25	14.99	32.59	6.16	0.5	20	15.20	32.54	6.07	0.5	24.06	386.2	0.085
55	10.02	32.66	6.95	0.8	30	14.54	32.60	6.28	0.5	24.25	368.5	0.122
65	8.73	32.65	6.87	1.0	50	11.08	32.65	6.90	0.7	24.96	300.8	0.190
75	8.32	32.69	6.76	1.0	75	8.32	32.69	6.76	1.0	25.44	255.0	0.259
89	7.82	32.74	6.63	1.1	100	7.71	32.87	6.00	1.4	25.67	232.8	0.321
108	7.68	33.02	5.67	1.5	150	7.44	33.53	4.30	1.8	26.22	180.3	0.425
133	7.50	33.31	4.98	1.7	200	7.02	33.85	3.75	2.0	26.53	151.3	0.509
161	7.42	33.64	4.08	1.9	250	6.39	33.93	3.33	2.1	26.68	137.0	0.583
213	6.85	33.88	3.65	2.0	300	5.85	33.96	2.66	2.2	26.78	128.0	0.651
289	5.96	33.96	2.88	2.2	400	5.16	34.01	1.48	2.7	26.89	116.7	0.778
393	5.20	34.00	1.52	2.7	500	4.63	34.16	0.84	2.8	27.07	99.8	0.891
530	4.53	34.14u	0.76	2.9	600	4.32	34.25	0.50		27.18	90.0	0.991
720	4.08	34.27u	0.35u	3.1u	700	4.12	34.30	0.42		27.24	84.0	1.084
					800	3.94	34.37	0.36		27.32	75.9	1.170
0	15.81u	32.01	6.16u	0.5	1000	3.51	34.49	0.28		27.46	63.3	1.325
9	15.54u	31.96u	6.17u	0.5	1200	3.06	34.53	0.47		27.53	56.8	1.461
464	4.81	34.17u	0.95	2.8	1500	2.49	34.58	0.86		27.62	48.3	1.644
631	4.24	34.31u	0.44u	3.2u	2000	1.88	34.68	1.56		27.75	35.4	1.895
790	3.96	34.36	0.36	3.1u								
975	3.56	34.48	0.28	3.0u								
1164	3.13	34.52	0.43	3.0u								
1424	2.63u	34.54u	0.72u	3.0u								
1689	2.22	34.66	1.11u	3.1u								
1409	2.64	34.58u	0.72	3.1u								
1692	2.19u	34.66u	1.09u	2.9u								
1984	1.88	34.65u	1.56	2.9u								
2379	1.77	34.68	1.97	2.9u								

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

18 HORIZON; August 16, 1955; 0737 GCT; 44°31'N, 128°53'W; sounding, 1530 fm; wind, 300°, force 2; weather, drizzle; sea, slight; wire angle, 05°.

0	15.53	32.70		0.6	0	15.53	32.70	0.6	24.11	381.7	0.000
10	15.34	32.70		0.5	10	15.34	32.70	0.5	24.15	377.3	0.038
25	14.98	32.71		0.6	20	15.12	32.71	0.5	24.19	373.4	0.076
55	10.06	32.74		0.8	30	14.78	32.71	0.6	24.28	365.4	0.113
70	8.94	32.79		1.0	50	10.81	32.73	0.8	25.06	290.9	0.178
84	8.62	32.84		1.0	75	8.80	32.80	1.0	25.45	253.7	0.247
110	7.91	32.92		1.2	100	8.19	32.87	1.1	25.59	240.4	0.309
134	7.75	33.26		1.7	150	7.62	33.42	1.8	26.11	190.7	0.417
163	7.55	33.58		1.8	200	7.26	33.87	2.2	26.51	153.0	0.505
216	7.12	33.91		2.3	250	6.53	33.92	2.3	26.66	139.2	0.579
283	6.03	33.93		2.3	300	5.83	33.94	2.3	26.75	130.0	0.648
384	5.21	33.98		2.6	400	5.14	33.99	2.7	26.89	117.3	0.776
509	4.71	34.13		3.0	500	4.72	34.12	3.0	27.03	103.9	0.892
678	4.16	34.25		3.2	600	4.39	34.19	3.1	27.13	94.8	0.997
907	3.62	34.40		3.3	700	4.11	34.26	3.2	27.21	86.6	1.094
1166	3.10	34.48		3.2u	800	3.86	34.31	3.3	27.28	79.9	1.184
1477	2.56	34.58		3.2	1000	3.43	34.43	3.3	27.42	66.9	1.346
					1200	3.04	34.50	3.3	27.50	58.9	1.487

19 HORIZON; August 17, 1955; 1838, 1933 GCT; 43°50'N, 130°30'W; sounding, 1850 fm; wind, 340°, force 3; weather, overcast; sea, rough; wire angle, 06°, 13°.

0	15.41	32.80	6.04	0.6	0	15.41	32.80	6.04	0.6	24.21	372.0	0.000
10	15.26	32.82	6.13	0.6	10	15.26	32.82	6.13	0.6	24.26	367.1	0.037
25	14.91	32.81	6.17	0.6	20	15.02	32.81	6.15	0.6	24.30	363.3	0.074
54	9.92	32.88	6.87	0.8	30	14.19	32.81	6.29	0.6	24.48	346.5	0.109
64	9.38	32.86	6.85	0.9	50	10.50	32.86	6.83	0.7	25.22	275.3	0.171
73	9.02	32.87	6.81	1.0	75	8.98	32.87	6.79	1.0	25.48	250.6	0.238
88	8.62	32.87	6.61	1.1	100	8.44	32.88	6.76	1.1	25.57	242.4	0.300
108	8.37	32.90	6.79	1.1	150	7.40	32.97	6.51	1.4	25.78	222.0	0.417
132	7.84	32.88	6.69	1.3	200	7.60	33.81	4.00	2.0	26.42	161.5	0.514
161	7.44	33.19	5.96	1.5	250	6.90	33.89	3.25	2.2	26.58	146.9	0.593
214	7.42	33.84	3.64	2.1	300	6.00	33.91	2.77	2.3	26.72	133.0	0.665
291	6.12	33.91	2.86	2.3	400	5.13	33.99	1.95	2.8	26.88	118.1	0.795
397	5.18	33.98	2.01	2.8	500	4.64	34.05	1.20	3.0	26.99	108.0	0.912
537	4.48	34.09	0.94	3.2u	600	4.25	34.17	0.69	3.3	27.13	94.2	1.019
728	4.06	34.28	0.34u	3.3	700	4.09	34.27	0.49	3.3	27.22	85.5	1.115
					800	3.92	34.31	0.39	3.3	27.27	81.3	1.205
0	15.44u	32.75u	6.20u	0.7u	1000	3.47	34.42	0.37	3.2	27.40	69.1	1.369
9	15.36u	32.78u	6.21u	0.7u	1200	3.00	34.49	0.48	3.2	27.51	58.7	1.512
479	4.76	34.03	1.28	3.0	1500	2.53	34.55	0.77	3.2	27.59	50.6	1.702
651	4.15	34.20	0.57	3.1u	2000	1.92	34.60	1.55	3.1	27.68	42.0	1.973
813	3.89	34.31	0.46u	3.3								
1004	3.46	34.42	0.37	3.2u								
1195	3.01	34.49	0.44	3.2								
1457	2.60	34.54	0.72	3.2								
1720	2.22	34.58	1.18	3.2								
2010	1.91	34.60	1.59	3.1								
2407	1.82	34.63	1.94	3.1u								

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 18, 1955; 0635 GCT; 42°58'N, 132°34'W; sounding, 2100 fm; wind, 315°, force 3; weather, fog in patches; sea, moderate; wire angle, 10°. 20

0	15.92	32.92	6.03	0.6	0	15.92	32.92	6.03	0.6	24.19	373.7	0.000
10	15.74	32.94	6.23	0.6	10	15.74	32.94	6.23	0.6	24.25	368.3	0.037
25	14.32	32.88	6.58	0.6	20	15.00	32.90	6.47	0.6	24.38	355.8	0.073
55	9.44	32.99	6.81	0.8	30	13.30	32.88	6.65	0.6	24.72	323.7	0.107
69	9.16	33.00	6.77	0.9	50	10.00	32.95	6.80	0.7	25.37	261.4	0.166
84	8.86	32.97	6.81	1.0	75	9.00	32.98	6.80	1.0	25.56	243.1	0.230
108	8.60	33.05	6.65	1.1	100	8.70	33.02	6.70	1.1	25.64	235.8	0.290
132	8.26	33.12	6.25	1.2	150	8.00	33.31	5.83	1.3	25.97	204.7	0.401
160	7.85	33.46	5.56	1.4	200	7.64	33.86	4.53	1.6	26.45	158.7	0.493
213	7.58	33.91	4.45	1.7	250	7.05	33.94	4.02	2.0	26.60	144.3	0.571
280	6.50	33.96	3.72	2.2	300	6.18	33.96	3.46	2.2	26.73	131.9	0.642
380	5.32	33.96	2.55	2.4	400	5.21	33.98	2.32	2.5	26.86	120.0	0.772
506	4.73	34.11	1.05	2.9	500	4.76	34.10	1.07	2.9	27.00	106.2	0.890
674	4.04	34.22	0.65	3.0	600	4.25	34.19	0.79	3.0	27.13	94.8	0.996
899	3.70	34.42	0.33	3.2	700	3.99	34.27	0.60	3.0	27.23	84.6	1.092
1158	3.05	34.52	0.44	3.2	800	3.85	34.36	0.40	3.2	27.32	76.1	1.178
1468	2.56	34.58	0.81	3.1	1000	3.46	34.45	0.35	3.2	27.45	66.2	1.335
					1200	2.97	34.53	0.52	3.2	27.53	56.1	1.474

HORIZON; August 18, 1955; 2108 GCT; 42°18'N, 135°19'W; sounding, 2250 fm; wind, 240°, force 3; weather, cloudy; sea, moderate; wire angle, 17°. 21

0	17.37	33.12	5.89	0.6	0	17.37	33.12	5.89	0.6	24.01	390.8	0.000
10	17.01	33.14	6.20	0.6	10	17.01	33.14	6.20	0.6	24.11	381.9	0.039
24	16.24	33.13	6.10	0.6	20	16.54	33.13	6.16	0.6	24.21	372.3	0.076
53	11.06	33.16	6.99	0.8	30	15.30	33.14	6.20	0.6	24.49	345.3	0.112
67	10.19	33.24	6.57	0.9	50	11.70	33.16	6.93	0.6	25.23	274.4	0.174
81	9.88	33.20	6.53	1.0	75	10.00	33.22	6.55	0.9	25.58	241.0	0.239
104	9.26	33.17	6.61	1.0	100	9.37	33.17	6.61	1.0	25.65	234.8	0.299
127	9.13	33.25	6.21	1.3	150	8.59	33.38	6.05	1.3	25.93	208.0	0.411
153	8.52	33.40	6.02	1.4	200	8.06	33.77	5.63	1.4	26.32	171.4	0.507
204	8.02	33.82	5.59	1.7	250	7.70	34.00	4.72	1.6	26.56	148.7	0.589
268	7.55	34.02	4.50	2.2	300	7.00	34.01	4.10	1.9	26.67	138.4	0.663
365	5.80	33.98	3.39	2.7	400	5.43	33.99	2.98	2.3	26.85	121.2	0.798
485	4.68	34.05	1.88	3.0	500	4.55	34.07	1.65	2.8	27.01	105.3	0.916
648	4.02	34.23	0.81	3.1	600	4.14	34.19	0.95	2.9	27.15	92.1	1.020
867	3.62	34.40	0.35	3.2	700	3.92	34.28	0.53	3.0	27.25	83.4	1.115
1115	2.98	34.47	0.36	3.0u	800	3.74	34.37	0.39	3.1	27.33	75.0	1.201
1412	2.62	34.59	0.69	3.1	1000	3.27	34.43	0.35	3.2	27.45	64.3	1.354
1684	2.26	34.62	1.12	3.0	1200	2.87	34.50	0.45	3.2	27.52	57.4	1.491
1975	1.97	34.66	1.55	3.0u	1500	2.50	34.60	0.83	3.2	27.64	46.3	1.671
2376	1.76	34.68	1.50u	-	2000	1.90	34.66	(1.57)	3.0	27.73	37.3	1.924

HORIZON; August 20, 1955; 0140 GCT; 42°15'N, 139°01'W; sounding, 2360 fm; wind, 180°, force 4; weather, cloudy; sea, rough; wire angle, 14°. 22

0	17.38	33.01	6.16	0.6	0	17.38	33.01	6.16	0.6	23.92	399.6	0.000
10	16.92	33.04	6.07	0.6	10	16.92	33.04	6.07	0.6	24.06	386.5	0.039
24	15.59	33.05	6.13	0.6	20	16.10	33.05	6.10	0.6	24.25	368.5	0.077
54	10.28	33.22	6.67	0.8	30	13.55	33.09	6.39	0.7	24.83	313.2	0.111
69	10.00	33.24	6.09	0.8	50	10.60	33.20	6.65	0.8	25.46	252.6	0.168
83	9.78	33.26	5.13u	0.9	75	9.90	33.25	5.28	0.8	25.62	237.3	0.230
107	9.50	33.24	6.05	0.9	100	9.58	33.24	5.95	0.9	25.68	232.1	0.289
131	9.32	33.39	6.28	1.0	150	8.90	33.53	6.21	1.2	26.00	201.3	0.398
159	8.47	33.54	6.07	1.3	200	8.12	33.83	5.52	1.4	26.35	168.1	0.492
210	8.06	33.88	5.48	1.4	250	7.67	33.99	4.97	1.5	26.55	149.8	0.573
276	7.37	34.02	4.64	1.5	300	7.00	34.01	4.32	1.6	26.66	139.2	0.647
374	5.64	33.95	3.22	2.1	400	5.28	33.97	2.85	2.3	26.85	120.9	0.782
495	4.65	34.07	1.97	2.6	500	4.63	34.07	1.92	2.6	27.00	106.2	0.900
658	4.01	34.18	0.82	2.9	600	4.20	34.14	1.01	2.8	27.10	96.8	1.007
879	3.47	34.34	0.54	3.0	700	3.88	34.22	0.71	2.9	27.20	87.9	1.105
1130	2.94	34.41	0.42	3.2	800	3.64	34.31	0.59	3.0	27.28	79.7	1.195
1438	2.52	34.53	0.33	3.1	1000	3.20	34.38	0.48	3.1	27.39	69.3	1.358
					1200	2.83	34.43	0.39	3.2	27.47	62.1	1.504

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

23 HORIZON; August 20, 1955; 1948 GCT; 42°20'N, 142°39'W; sounding, 2520 fm; wind, 310°, force 4; weather, overcast; sea, very rough; wire angle, 15°.

0	17.71	33.07	5.73	0.6	0	17.71	33.07	5.73	0.6	23.88	402.9	0.000
9	17.68	33.28r	5.67	0.6	10	17.69	33.07	5.66	0.6	23.89	402.0	0.040
23	15.54	33.17	6.45	0.6	20	16.50	33.12	6.46	0.6	24.21	371.8	0.079
51	10.75	33.29	7.09	0.8	30	13.80	33.23	6.79	0.6	24.88	307.7	0.113
65	9.69	33.24	6.85	1.0	50	10.85	33.29	7.09	0.8	25.49	249.9	0.169
79	9.86	33.33	6.71	1.0	75	9.79	33.28	6.78	1.0	25.67	232.6	0.230
102	9.84	33.43	6.54	0.9u	100	9.85	33.42	6.55	1.0	25.76	224.2	0.287
125	9.35	33.49	6.35	1.1	150	9.00	33.86	5.92	1.2	26.24	178.6	0.389
151	9.00	33.86	5.92	1.2	200	8.58	34.02	5.49	1.4	26.44	159.9	0.475
201	8.56	34.02	5.49	1.4	250	7.93	34.01	5.24	1.5	26.53	151.4	0.555
265	7.69	34.00	5.12	1.5	300	7.19	33.99	4.69	1.6	26.64	141.2	0.631
361	6.33	33.97	3.93	1.9	400	5.81	33.97	3.48	2.1	26.78	127.4	0.770
481	4.81	34.00	2.44	2.5	500	4.68	34.01	2.22	2.5	26.96	110.8	0.895
644	4.12	34.13	1.16	2.7	600	4.26	34.09	1.40	2.7	27.06	101.0	1.006
863	3.44	34.28	0.54	2.9	700	3.93	34.19	0.95	2.8	27.18	90.0	1.107
1112	2.94	34.36	0.39	3.1	800	3.62	34.26	0.65	2.9	27.26	82.2	1.200
1410	2.53	34.52	0.46	3.1	1000	3.15	34.32	0.45	3.0	27.35	73.7	1.369
1681	2.27	34.56	0.92	3.0	1200	2.81	34.40	0.40	3.1	27.44	64.6	1.521
1970	1.98	34.60	1.48	2.9	1500	2.44	34.54	0.56	3.1	27.59	50.5	1.717
2345	1.75	34.64	2.00	2.9u	2000	1.96	34.61	1.50	2.9	27.70	40.8	1.994

24 HORIZON; August 21, 1955; 1242 GCT; 42°17'N, 146°16'W; sounding, 2650 fm; wind, 320°, force 2; weather, overcast; sea, moderate; wire angle, 18°.

0	17.96	33.11	5.89	0.6	0	17.96	33.11	5.89	0.6	23.86	405.3	0.000
9	17.96	33.12	5.95	0.6	10	17.96	33.12	5.98	0.6	23.87	404.2	0.041
23	15.69	33.16	6.50	0.6	20	17.94	33.12	6.01	0.6	23.88	403.8	0.081
51	10.18	33.35	7.60	0.8	30	13.19	33.27	7.10	0.6	25.04	292.9	0.116
64	9.37	33.32	7.12	1.0	50	10.30	33.35	7.60	0.8	25.64	235.4	0.169
79	9.08	33.33	6.83	1.1	75	9.16	33.32	6.87	1.1	25.80	220.3	0.227
101	8.76	33.35	6.74	1.1	100	8.77	33.35	6.75	1.1	25.89	212.2	0.281
124	8.40	33.40	7.05	1.1	150	8.40	33.73	6.50	1.1	26.23	179.5	0.380
151	8.40	33.73	6.49	1.3	200	8.22	34.02	5.92	1.4	26.49	155.2	0.465
200	8.22	34.02	5.92	1.4	250	7.37	33.94	5.95	1.5	26.56	148.9	0.543
263	7.17	33.93	5.96	1.5	300	6.63	33.94	5.32	1.7	26.65	139.5	0.617
357	6.01	33.96	4.18	2.1	400	5.45	34.06	3.50	2.3	26.90	116.4	0.749
474	4.79	34.14	2.60	2.6	500	4.64	34.14	2.43	2.7	27.06	100.7	0.862
631	4.02	34.15	1.10	2.9	600	4.14	34.15	1.23	2.8	27.11	96.0	0.967
843	3.44	34.31	0.67	3.1	700	3.82	34.21	0.90	3.0	27.19	88.2	1.065
1088	2.90	34.43	0.43	3.2	800	3.55	34.29	0.70	3.1	27.30	78.3	1.154
1395	2.49	34.52	0.54	3.2	1000	3.08	34.38	0.50	3.2	27.41	67.9	1.314
					1200	2.72	34.46	0.45	3.2	27.50	59.3	1.456

25 HORIZON; August 26, 1955; 0405 GCT; 42°17'N, 150°00'W; sounding, 2740 fm; wind, 260°, force 4; weather, cloudy; sea, moderate; wire angle, 07°.

0	19.69	33.47	5.74	0.3	0	19.69	33.47	5.74	0.3	23.70	420.7	0.000
10	19.48	33.48	5.70	0.3	10	19.48	33.48	5.70	0.3	23.76	415.0	0.042
25	15.98	33.55	-	0.4	20	17.28	33.53	6.02	0.4	24.34	359.8	0.081
56	10.38	33.67	6.90	0.8	30	14.82	33.57	6.40	0.4	24.93	303.3	0.114
70	9.88	33.73	6.59	0.9	50	10.97	33.65	6.89	0.7	25.75	225.1	0.167
85	9.38	33.74	6.47	1.0	75	9.75	33.74	6.53	0.9	26.03	198.4	0.220
109	8.76	33.73	6.37	1.1	100	8.92	33.73	6.43	1.1	26.16	186.7	0.269
134	8.75	33.86	6.33	1.2	150	8.81	33.93	6.15	1.2	26.33	170.1	0.359
163	8.84	33.98	6.05	1.2	200	8.70	34.08	5.75	1.3	26.47	157.0	0.442
216	8.52	34.11	5.65	1.3	250	8.02	34.08	5.46	1.4	26.57	147.8	0.521
282	7.54	34.04	5.21	1.6	300	7.31	34.03	5.02	1.7	26.63	141.6	0.595
382	6.21	33.99	3.89	2.0	400	6.03	33.99	3.63	2.1	26.78	128.0	0.735
506	4.83	34.04	2.44	2.6	500	4.91	34.03	2.50	2.6	26.94	112.1	0.860
675	4.05	34.18	1.20	2.9	600	4.37	34.12	1.70	2.8	27.07	99.9	0.972

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

HORIZON; August 11, 1955; 0405 GCT; 43°46'N, 125°10'W; sounding, 900 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 23°. 26

0	12.71	32.27	7.07	0.5	0	12.71	32.27	7.07	0.5	24.36	357.8	0.000	
9	12.67	32.27	7.12	0.4	10	12.67	32.27	7.15	0.4	24.37	356.7	0.036	
23	8.99	32.57	6.90	0.8	20	9.95	32.52	7.04	0.6	25.05	291.9	0.068	
51	8.30	32.73	6.35	1.0	30	8.79	32.59	6.83	0.9	25.29	268.8	0.096	
64	8.11	32.99	5.35	1.5	50	8.30	32.73	6.30	1.0	25.47	252.0	0.148	
79	7.98	33.20	4.71	1.6	75	7.99	33.14	4.85	1.6	25.84	217.0	0.207	
102	8.20	33.68	4.13	1.9	100	8.20	33.65	4.13	1.9	26.20	182.3	0.257	
125	7.79	33.92	3.21	2.3	150	7.38	33.98	2.75	2.1	26.58	146.4	0.340	
152	7.37	33.98	2.75	2.1	200	6.89	34.04	2.30	2.2	26.70	135.6	0.412	
205	6.84	34.04	2.24	2.2	250	6.42	34.05	1.88	2.3	26.76	129.2	0.480	
269	6.24	34.05	1.71	2.4	300	6.11	34.07	1.48	2.5	26.83	123.3	0.545	
367	5.80	34.14	1.01	2.6	400	5.63	34.17	0.89	2.6	26.96	110.1	0.666	
487	5.13	34.23	0.58	2.8	500	5.07	34.24	0.57	2.8	27.09	98.0	0.775	
649	4.54	34.30	0.36	2.8	600	4.69	34.28	0.39	2.8	27.16	91.2	0.876	
866	4.04	34.40	0.35	2.6	700	4.41	34.33	0.35	2.8	27.24	84.3	0.970	
					800	4.18	34.38	0.35	2.7	27.30	78.1	0.059	

HORIZON; August 10, 1955; 2204 GCT; 43°25'N, 125°58'W; sounding, 1690 fm; wind, 350°, force 4; weather, overcast; sea, rough; wire angle, 23°. 27

0	14.56	31.98	6.11	0.5	0	14.56	31.98	6.11	0.5	23.76	414.6	0.000	
9	14.44	31.91	6.31	0.6	10	14.43	31.91	6.30	0.6	23.74	416.9	0.042	
22	13.94	32.20	5.66	0.5	20	14.16	32.13	6.03	0.5	23.96	395.8	0.082	
50	8.28	32.65	6.72	0.9	30	11.00	32.38	6.31	0.7	24.76	319.5	0.118	
64	8.08	32.70	6.69	1.0	50	8.28	32.65	6.72	0.9	25.41	257.5	0.176	
78	7.78	32.83	6.62	1.2	75	7.81	32.75	6.66	1.2	25.56	243.2	0.239	
100	7.96	33.36	4.41	1.7	100	7.96	33.36	4.41	1.7	26.02	200.0	0.295	
124	7.80	33.71	3.36	2.0	150	7.60	33.85	3.09	2.1	26.45	158.9	0.385	
150	7.60	33.85	3.09	2.1	200	6.81	34.05	2.71	2.1	26.72	133.7	0.460	
199	6.82	34.05	2.75	2.1	250	6.40	34.03	2.35	2.2	26.75	130.1	0.527	
260	6.33	34.02	2.28	2.2	300	6.05	34.05	1.95	2.3	26.82	123.9	0.592	
351	5.72	34.10	1.59	2.6	400	5.39	34.12	1.21	2.9	26.96	110.1	0.714	
464	5.00	34.16	0.89	3.0	500	4.82	34.19	0.78	3.0	27.07	99.8	0.824	
616	4.39	34.32	0.53	3.0	600	4.45	34.31	0.57	3.0	27.21	86.7	0.923	
817	3.83	34.58r	-	3.0	700	4.14	(34.37)		3.0	(27.29)	(78.9)	(1.012)	
1056	3.36	34.46	3.37r	3.1	800	3.87	(34.40)		3.0	(27.35)	(73.4)	(1.095)	
1346	2.83	34.52	3.64u	3.0	1000	3.47	(34.45)		3.1	(27.43)	(66.1)	(1.249)	
					1200	3.10	34.49		3.1	27.49	59.9	(1.391)	

HORIZON; August 10, 1955; 1110 GCT; 42°46'N, 127°32'W; sounding, 1600 fm; wind, 340°, force 4; weather, overcast; sea, rough; wire angle, 10°. 28

0	15.54	31.53	6.07	0.4	0	15.54	31.53	6.07	0.4	23.20	467.8	0.000	
10	15.57	31.46	5.96	0.4	10	15.57	31.46	5.96	0.4	23.15	473.2	0.047	
25	15.21	32.04	5.75	0.5	20	15.55	31.52	5.88	0.4	23.20	468.3	0.094	
54	10.70	32.56	7.04	0.6	30	15.05	32.12	5.77	0.5	23.76	415.0	0.138	
69	9.10	32.65	6.77	0.9	50	11.60	32.52	6.93	0.6	24.76	319.5	0.212	
82	8.80	32.67	6.72	0.9	75	8.92	32.65	6.74	0.9	25.32	266.1	0.286	
105	-	31.48r	6.17	0.7u	100	8.40	32.86	6.35	1.0	25.55	244.1	0.350	
128	7.94	-	-	-	150	7.79	33.60	3.65	1.9	26.23	179.4	0.457	
156	7.74	33.66	3.60	2.0	200	7.32	33.93	3.03	2.2	26.55	149.4	0.540	
205	7.22	33.96	2.98	2.2	250	6.62	34.03	2.62	2.3	26.72	132.9	0.612	
267	6.46	34.04	2.52	2.3	300	6.10	34.06	2.24	2.4	26.82	123.7	0.678	
360	-	34.09	1.74	2.6	400	5.22	34.10	1.42	2.7	26.97	109.9	0.799	
476	4.79	34.17	1.08	2.8	500	4.72	34.19	0.92	2.9	27.09	98.0	0.908	
635	4.52	34.33	0.43	3.1	600	4.56	34.32	0.48	3.1	27.20	87.3	1.006	
852	4.04	34.38	0.29	3.1	700	4.41	34.34	0.35	3.1	27.24	83.8	1.098	
1103	3.33	34.48	0.38	3.1	800	4.18	34.37	0.29	3.1	27.29	79.2	1.187	
1408	2.76	34.58	0.72	3.0	1000	3.63	34.43	0.31	3.1	27.40	68.9	1.350	
					1200	3.13	34.51	0.48	3.1	27.50	59.6	1.496	

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

29 HORIZON; August 9, 1955; 2155, 2316 GCT; 42°03'N, 129°19'W; sounding, 1820 fm; wind, 345°, force 4; weather, overcast; sea, rough; wire angle, 15°, 30°.

0	15.36	32.38	6.10	0.4	0	15.36	32.38	6.10	0.4	23.90	401.4	0.000
9	15.37	32.31	6.07	0.5	10	15.35	32.31	6.05	0.5	23.85	406.5	0.040
25	15.32	32.37	6.06	0.5	20	15.34	32.35	6.05	0.5	23.88	403.4	0.081
53	11.88	32.66	6.08	0.6	30	14.90	32.41	6.06	0.5	24.02	390.0	0.121
64	10.94	32.63	6.61	0.7	50	12.21	32.63	6.07	0.6	24.73	322.4	0.192
73	9.98	32.64	6.58	0.9	75	9.80	32.69	6.55	0.9	25.20	277.2	0.267
87	9.20	32.74	6.33	1.0	100	8.96	32.87	5.96	1.1	25.49	250.2	0.334
107	8.84	32.92	5.82	1.3	150	8.20	33.53	4.29	1.8	26.11	191.4	0.445
130	8.47	33.21	5.13	1.5	200	7.67	33.81	3.70	1.9	26.41	162.8	0.535
159	8.08	33.62	4.09	1.9	250	6.90	33.91	3.33	2.0	26.60	144.8	0.614
209	7.58	33.84	3.62	1.9	300	6.03	33.98	2.76	2.2	26.76	129.3	0.684
284	6.29	33.96	3.01	2.1	400	5.25	34.02	1.74	2.4	26.89	116.8	0.811
390	5.29	34.02	1.75	2.4u	500	4.70	34.09	1.29	2.6	27.01	105.5	0.927
529	4.56	34.12	1.02	2.8u	600	4.40	34.21	0.55	2.9	27.14	93.9	1.034
722	4.20u	34.29u	0.30	3.0	700	4.23	34.28	0.32	3.0	27.22	86.1	1.128
					800	4.02	34.34	0.31	3.0	27.28	80.1	1.218
1	15.36	32.30u	6.10	0.5u	1000	3.55	34.51	0.38	3.0	27.47	62.5	1.376
425	5.17	34.03	1.70	2.4u	1200	3.14	34.52	0.51	3.0	27.51	58.1	1.515
579	4.44	34.19	0.74	2.7u	1500	2.67	34.54	0.90	2.9	27.58	51.4	1.706
725	4.16u	34.32u	0.31	3.1u	2000	1.97	34.66	1.70	2.8	27.72	38.1	1.978
943	3.67	34.51	0.33	3.0	2500	1.72	34.66	2.11	2.7	27.75	35.9	2.211
1163	3.22	34.61r	0.45	3.0	3000	(1.62)	(34.70)			(27.79)	(32.1)	(2.430)
1471	2.62	34.54	0.81	2.9								
1829	2.08	34.64	1.33	2.8								
2197	1.86	34.66	1.87	2.7								
2665	1.66	34.67	2.25	2.8r								
2957	1.63	34.70	2.56	2.7u								

30 HORIZON; August 9, 1955; 0925 GCT; 41°13'N, 131°07'W; sounding, 1995 fm; wind, 015°, force 4; weather, overcast; sea, moderate; wire angle, 16°.

0	15.68	32.83	6.06	0.4	0	15.68	32.83	6.06	0.4	24.17	375.5	0.000
10	15.71	32.77	5.88	0.5	10	15.71	32.77	5.88	0.5	24.12	380.2	0.038
24	15.42	32.94	6.12	0.5	20	15.56	32.87	6.06	0.5	24.23	369.7	0.075
53	11.08	32.92	6.76	0.6	30	14.59	32.94	6.30	0.5	24.50	344.1	0.111
68	9.98	32.84	6.63	0.8	50	11.40	32.93	6.75	0.6	25.11	286.1	0.174
83	9.86	32.91	6.56	0.8	75	9.86	32.86	6.56	0.8	25.33	265.2	0.244
106	9.16	32.92	6.35	0.9	100	9.50	32.95	6.35	0.9	25.46	253.0	0.309
132	8.52	33.05	5.84	1.2	150	8.26	33.29	5.43	1.3	25.91	210.0	0.426
164	8.12	33.43	5.10	1.4	200	7.82	33.80	3.25	1.9	26.38	165.8	0.521
210	7.76	33.84	3.13	2.0	250	7.30	33.95	2.75	2.1	26.58	147.0	0.601
273	7.04	33.99	2.56	2.2	300	6.80	34.03	2.28	2.3	26.71	134.3	0.674
366	-	34.04	1.74	2.4	400	6.04	34.11	1.45	2.5	26.87	119.0	0.805
487	5.53	34.14	1.02	2.7	500	5.47	34.15	1.00	2.7	26.97	109.8	0.925
647	4.68	34.22	0.57	2.9u	600	4.92	34.19	0.70	2.8	27.07	100.1	1.036
864	4.11a)	34.36	0.26	3.0	700	4.55	34.25	0.48	2.9	27.16	91.8	1.139
1114	3.36	34.48	0.39	3.0	800	4.29	34.32	0.29	3.0	27.24	83.9	1.234
1422	2.77	34.53	0.63	3.0	1000	3.66	34.44	0.31	3.0	27.39	69.3	1.403
					1200	3.17	34.50	0.47	3.0	27.49	59.9	1.549

a) Mean value of 4.07 and 4.15°C.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 8, 1955; 2148, 2300 GCT; 40°28'N, 132°57'W; sounding, 2250 fm; wind, 045°, force 4; weather, cloudy; sea, rough; wire angle, 05°, 10°. 31

0	16.26	32.86	5.67	0.6	0	16.26	32.86	5.67	0.6	24.07	385.4	0.000
10	16.06	32.86	5.71	0.5	10	16.06	32.86	5.71	0.5	24.11	381.2	0.038
25	15.55	33.10	5.89	0.5	20	15.76	33.02	5.81	0.5	24.30	363.2	0.076
55	11.10	33.09	6.56	0.6	30	14.40	33.10	6.18	0.5	24.66	329.1	0.110
65	10.44	33.04	6.48	0.7	50	11.53	33.09	6.54	0.6	25.22	276.2	0.171
76	10.08	32.98	6.49	0.8	75	10.10	32.98	6.49	0.8	25.38	260.3	0.238
91	9.99	33.04	6.32	0.8	100	9.85	33.07	6.24	0.8	25.49	249.8	0.303
110	9.64	33.10	6.21	0.9	150	8.55	33.25	5.70	1.2	25.85	216.2	0.420
135	8.84	33.17	5.85	1.2	200	8.23	33.67	4.90	1.5	26.21	181.3	0.521
165	8.37	33.33	5.60	1.3	250	7.82	33.92	4.25	1.8	26.47	157.1	0.608
218	8.20	33.86	4.67	1.6	300	6.95	33.95	3.77	1.9	26.63	142.2	0.685
294	7.06	33.95	3.86	1.9	400	5.50	33.98	2.80	2.4	26.83	123.2	0.822
401	5.50	33.98	2.79	2.4	500	4.93	34.04	1.35	2.7	26.95	112.1	0.945
542	4.72	34.11	1.02	2.9	600	4.50	34.18	0.80	2.9	27.09	97.7	1.055
731	4.06	34.27	0.44	3.1	700	4.15	34.23	0.50	3.1	27.19	89.1	1.155
					800	3.79	34.33			27.29	78.9	1.246
0	16.41u	32.86	-	0.5u	1000	3.35	34.41			27.41	68.1	1.408
10	16.09u	32.86	-	0.6u	1200	3.00	34.51			27.53	56.8	1.550
488	4.69	34.03	-	3.2r	1500	2.55	(34.59)			(27.62)	(48.2)	(1.733)
663	4.27a)	34.20	-	3.0	2000	1.99	(34.64)			(27.70)	(39.9)	(1.997)
826	3.70	34.33	-	2.8r								
1020	3.31	34.43	-	2.8r								
1218	2.97	34.52	-	2.8r								
1485	2.57	34.58	-	3.0r								
1756	2.19	34.27r	-	3.2								
2052	1.96	34.51r	-	3.2								
2453	1.76	34.66	-	3.1								

HORIZON; August 19, 1955; 1134 GCT; 40°27'N, 137°20'W; sounding, 2250 fm; wind, 225°, force 2; weather, partly cloudy; sea, moderate; wire angle, 07°. 32

0	18.91	33.41	5.73	0.5	0	18.91	33.41	5.73	0.5	23.85	405.9	0.000
10	18.58	33.42	5.82	0.4	10	18.58	33.42	5.82	0.4	23.95	397.1	0.040
25	15.37	33.35	6.62	0.5	20	17.47	33.39	6.18	0.4	24.19	373.7	0.079
49	12.27	33.33	6.63	0.5	30	14.00	33.33	6.63	0.5	24.92	304.2	0.113
64	11.56	33.36	6.39	0.6	50	12.20	33.33	6.63	0.5	25.28	270.4	0.170
79	11.57	33.47	6.32	0.6	75	11.55	33.44	6.35	0.6	25.48	251.1	0.236
98	10.78	33.35	6.44	0.7	100	10.70	33.35	6.41	0.7	25.56	243.0	0.298
123	9.85	33.34	5.98	1.0	150	9.24	33.56	5.70	1.2	25.97	204.5	0.411
150	9.24	33.56	5.70	1.2	200	8.72	33.82	5.70	1.3	26.26	176.6	0.508
198	8.76	33.81	5.71	1.3	250	8.23	33.95	5.04	1.5	26.44	160.2	0.594
260	8.11	33.97	4.86	1.5	300	7.43	33.96	4.41	1.7	26.56	147.9	0.674
350	6.36	33.95	3.77	2.0	400	5.54	33.95	2.87	2.4	26.80	125.5	0.815
464	5.06	33.95	2.19	2.6	500	4.87	33.96	1.90	3.0	26.89	117.0	0.941
619	4.28	34.13	0.98	3.0	600	4.35	34.12	1.02	3.2	27.08	99.7	1.055
834	3.83	34.30	0.43	3.3	700	4.10	34.21	0.70	3.3	27.17	90.3	1.156
1080	3.28	34.42	0.34	3.3	800	3.90	34.28	0.48	3.3	27.24	83.4	1.249
1381	2.74	34.53	0.60	3.2	1000	3.47	34.38	0.34	3.3	27.36	72.1	1.420
					1200	3.07	34.47	0.46	3.3	27.48	61.3	1.569

a) Mean value of 4.24 and 4.30°C.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

33 HORIZON; August 6, 1955; 1848 GCT; 41°45'N, 124°29'W; sounding, 130 fm; wind, 360°, force 2; weather, fog; sea, rough; wire angle, 12°.

0	9.6	33.84	4.67	2.1	0	9.6	33.84	4.67	2.1	26.13	188.8	0.000
10	8.80	33.88	3.92	2.1	10	8.80	33.88	3.92	2.1	26.30	173.4	0.018
15	8.44	33.89	3.48	2.3	20	8.39	33.89	3.56	2.4	26.36	166.9	0.035
20	8.39	33.89	3.56	2.4	30	8.16	33.87	3.48	2.3	26.38	165.3	0.052
25	8.34	33.89	3.39	2.5	50	7.84	33.89	3.00	2.3	26.45	159.0	0.084
30	8.16	33.87	3.48	2.3	75	7.50	33.99	2.45	2.4	26.58	146.9	0.123
35	8.06	33.89	3.56	2.3	100	7.23	34.00	2.42	2.5	26.62	142.7	0.159
44	7.88	33.90	3.18	2.3	150	6.91	34.01	1.95	2.5	26.68	137.2	0.230
54	7.84	33.89	3.04	2.2	200	6.80	34.05	1.70	2.9	26.72	133.1	0.299
63	7.78	33.91	2.87	2.2								
73	7.53	33.99	2.44	2.4								
93	7.32	33.99	2.51	2.3								
109	7.15	34.01	2.34	2.7								
138	6.96	34.00	2.11	2.5								
169	6.83	34.04	1.86	2.6								
202	6.78	34.05	1.68	3.0								

34 HORIZON; August 7, 1955; 0020 GCT; 41°31'N, 125°05'W; sounding, 1300 fm; wind, 330°, force 3; weather, overcast; sea, very rough; wire angle, 08°.

0	12.38	32.56	6.42	0.6	0	12.38	32.56	6.42	0.6	24.64	330.5	0.000
10	11.78	32.58	6.53	0.5	10	11.78	32.58	6.53	0.5	24.78	317.8	0.032
24	10.03	32.72	6.58	0.8	20	10.60	32.68	6.58	0.7	25.07	290.3	0.063
53	8.72	32.86	6.31	1.1	30	9.66	32.74	6.54	0.9	25.27	271.2	0.091
67	8.06	-	5.67	1.8	50	8.86	32.83	6.37	1.1	25.47	252.0	0.144
82	8.70	33.40	5.21	1.8	75	8.48	33.27	5.39	1.6	25.87	214.1	0.202
106	8.51	33.41	5.10	2.2	100	8.55	33.40	5.11	1.8	25.96	205.0	0.255
130	8.35	33.68	4.65	2.2	150	7.72	33.78	4.10	2.1	26.38	165.9	0.349
158	7.70	33.80	3.72	2.1	200	7.20	33.92	2.93	2.1	26.56	148.0	0.429
210	7.12	33.96	2.83	2.5	250	6.70	34.03	2.15	2.3	26.72	133.3	0.501
276	6.46	34.07	1.82	2.9	300	6.23	34.10	1.60	2.6	26.84	121.4	0.567
498	5.27	34.23	0.75	3.1	400	5.68	34.18	1.08	2.8	26.97	109.5	0.687
664	4.66	34.33	0.35	3.3	500	5.26	34.23	0.73	2.9	27.06	101.2	0.798
888	4.07	34.41	0.33	3.3a)	600	4.88	34.29	0.40	3.0	27.15	92.3	0.901
1142	-	34.50	0.69	3.2	700	4.56	34.35	0.34	3.2	27.23	82.4	0.995
1448	2.75	34.56	0.87	-	800	4.29	34.38	0.35	3.3	27.29	79.2	1.083
					1000	3.80	34.45	0.38	3.3	27.40	69.1	1.248
					1200	3.33	34.50	0.55	3.3	27.48	61.2	1.396

a) Mean value of 2.9 and 3.6 μg at/L.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 7, 1955; 1038, 1222 GCT; 40°37'N, 127°03'W; sounding, 1550 fm; wind, 360°, force 4; weather, overcast; sea, rough; wire angle, 15°, 06°. 35

0	11.72	32.94	6.45	0.8	0	11.72	32.94	6.45	0.8	25.06	290.1	0.000
9	11.66	32.92	6.53	0.7	10	11.64	32.92	6.54	0.7	25.06	290.6	0.029
23	11.43	32.94	6.30	0.7	20	11.51	32.93	6.31	0.7	25.10	287.3	0.058
51	9.18	33.27	5.43	1.7	30	11.33	33.00	6.24	0.7	25.18	279.4	0.086
60	9.08	33.27	5.38	1.6	50	9.18	33.27	5.44	1.7	25.76	224.8	0.137
69	8.91	33.37	5.10	1.6	75	8.69	33.41	4.81	1.7	25.95	206.7	0.191
81	8.68	33.43	4.85	1.7	100	8.24	33.69	3.95	1.8	26.23	179.8	0.240
99	8.24	33.69	3.98	1.8	150	7.53	33.87	2.87	2.1	26.48	156.1	0.325
123	7.80	33.79	3.24	2.0	200	7.07	33.98	2.37	2.2	26.63	142.0	0.401
150	7.53	33.87	2.87	2.1	250	6.69	34.01	2.00	2.3	26.70	134.8	0.472
200	7.07	33.98	2.37	2.2	300	6.38	34.03	1.73	2.4	26.76	129.0	0.540
274	6.56	34.02	1.86	2.4	400	5.60	34.10	1.11	2.6	26.92	114.2	0.666
372	5.78	34.07	1.27	2.6	500	5.02	34.19	0.63	2.8	27.05	101.9	0.780
510	4.98	34.20	0.56	2.9u	600	4.68	34.27	0.43	2.9	27.16	91.9	0.883
695	4.40	34.32u	0.34u	3.1u	700	4.38	34.33	0.34	2.9	27.24	84.2	0.977
					800	4.12	34.37	0.31	3.0	27.30	78.1	1.066
0	11.54u	32.90u	6.65u	0.8u	1000	3.51	34.49	0.40	3.0	27.44	64.5	1.223
10	11.38u	32.86u	6.60u	0.8u	1200	3.08	34.52	0.54	2.9	27.51	58.0	1.362
491	5.13	34.18	0.76	2.6u	1500	2.57	34.56	0.99		27.60	50.0	1.549
663	4.48	34.34u	0.34u	2.9	2000	1.89	34.65	1.65		27.72	38.1	1.812
828	4.04	34.38	0.30	3.0								
1022	3.44	34.49	0.41	3.0								
1215	3.06	34.52	0.55	2.9								
1483	2.59	34.56	0.91	2.7								
1753	2.14	34.60	1.32	3.0r								
2048	1.86	34.67	1.80	2.8r								
2446	1.75	34.69	2.10	2.8r								

HORIZON; August 7, 1955; 2241 GCT; 40°00'N, 128°41'W; sounding, 2510 fm; wind, 360°, force 4; weather, overcast; sea, moderate; wire angle, 22°. 36

0	14.67	32.56	6.24	0.4	0	14.67	32.56	6.24	0.4	24.18	374.8	0.000
9	14.56	32.52	6.11	0.4	10	14.53	32.52	6.10	0.4	24.18	374.8	0.037
23	14.32	32.49	6.07	0.4	20	14.33	32.49	6.06	0.4	24.20	372.5	0.075
51	11.63	32.58	6.71	0.6	30	14.33	32.52	6.06	0.4	24.23	369.9	0.112
65	9.81	32.69	6.48	0.8	50	11.73	32.58	6.70	0.6	24.78	317.8	0.181
80	9.16	32.86	6.10	1.0	75	9.35	32.80	6.23	0.9	25.37	261.3	0.254
103	8.76	33.03	5.66	1.3	100	8.80	33.01	5.75	1.3	25.62	237.9	0.317
126	8.52	33.39	4.88	1.8	150	8.30	33.67	4.34	2.0	26.20	182.2	0.423
155	8.24	33.68	4.26	2.0	200	7.50	33.92	3.31	2.1	26.52	152.0	0.508
205	7.41	33.96	3.21	2.1	250	7.00	34.05	2.01	2.2	26.70	135.5	0.581
268	6.86	34.06	1.87	2.2	300	6.59	34.06	1.71	2.3	26.76	129.5	0.650
362	5.98	34.05	1.41	2.7	400	5.64	34.06	1.25	2.8	26.88	118.1	0.779
482	5.14	34.13	0.91	3.0	500	5.07	34.16	0.87	3.1	27.03	104.2	0.895
644	4.56	34.29	0.43	3.3	600	4.71	34.26	0.56	3.3	27.14	93.3	1.000
860	3.89	34.39	0.36	3.3	700	4.38	34.32	0.39	3.3	27.23	84.4	1.095
1109	3.16	34.49	0.53	3.1u	800	4.08	34.36	0.36	3.3	27.29	79.0	1.184
1431	2.66	34.53	0.82	3.1	1000	3.47	34.45	0.45		27.43	65.5	1.344
					1200	2.99	34.51	0.63		27.52	57.1	1.483

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

37 HORIZON; August 8, 1955; 0547, 0656 GCT; 39°27'N, 129°55'W; sounding, 2510 fm; wind, 360°, force 5; weather, overcast; sea, very rough; wire angle, 25°, 18°.

0	16.26	32.88	6.03	0.4	0	16.26	32.88	6.03		24.08	384.3	0.000
9	16.22	32.89	5.84	0.4	10	16.25	32.89	5.81	0.4	24.10	382.5	0.038
23	16.28	32.94	5.68	0.5	20	16.30	32.93	5.71	0.4	24.11	381.2	0.077
49	13.65	33.01	6.35	0.5	30	16.28	32.95	5.65	0.5	24.13	379.8	0.115
58	11.80	32.90	6.50	0.6	50	13.40	33.00	6.38	0.5	24.79	316.8	0.185
67	10.60	32.84	6.41	0.7	75	10.44	32.92	6.43	0.5	25.27	270.6	0.258
79	10.36	32.92	6.44	0.8	100	9.95	32.88	5.88	0.8	25.34	264.7	0.326
95	10.06	32.88	5.84	0.8	150	8.81	33.39	5.16	0.8	25.91	210.2	0.446
116	9.60	32.91	6.14	0.9	200	8.03	33.78	4.32	1.3	26.34	169.7	0.542
139	9.06	33.21	5.41	1.2	250	7.25	33.97	3.47	1.5	26.60	145.0	0.623
182	8.26	33.68	4.62	1.4	300	6.55	34.00	2.96	1.8	26.71	133.8	0.695
245	7.34	33.96	3.55	1.8	400	5.61	34.02	1.92	2.1	26.85	120.8	0.827
334	6.18	34.01	2.68	2.2	500	4.98	34.09	1.00	2.5	26.98	108.2	0.946
456	5.22	34.05	1.40	2.7u	600	4.58	34.19	0.62	2.9	27.11	96.6	1.054
630	4.50	34.23	0.57	3.1u	700	4.29	34.26		3.1	27.19	88.3	1.153
					800	4.03	34.31		3.2	27.26	82.1	1.245
0	16.26	32.98u		0.5u	1000	3.48	34.44		3.2	27.42	67.4	1.410
9	16.25u	32.88u		0.5	1200	3.03	34.53		3.2	27.53	56.2	1.550
455	5.22	34.04		2.9u	1500	2.53	34.59		3.0	27.62	47.7	1.731
627	4.50	34.20		3.2u	2000	1.94	34.66		3.2	27.74	36.9	1.982
796	4.04	34.31		3.1u								
983	3.52	34.44		3.2								
1170	3.09	34.52		3.1u								
1431	2.64	34.58		3.2								
1693	2.25	34.61		3.1								
1982	1.95	34.66		3.0								
2376	1.77	34.68		3.0u								

38 BLACK DOUGLAS; August 11, 1955; 1845 GCT; 38°34'N, 132°39'W; sounding, 2650 fm; wind, 355°, force 3; weather, overcast; sea, moderate; wire angle, 03°.

0	17.61	33.30	5.46		0	17.61	33.30	5.46		24.09	383.6	0.000
10	17.52	33.28	5.46		10	17.52	33.28	5.46		24.10	382.4	0.038
24	17.16	33.25	5.44		20	17.30	33.26	5.44		24.13	379.5	0.077
47	13.82	33.21	6.22		30	15.40	33.23	5.87		24.54	340.5	0.113
62	12.51	33.29u	6.41		50	13.58	33.22	6.29		24.92	304.0	0.177
76	12.15	33.18	6.19		75	12.15	33.18	6.20		25.17	280.3	0.251
95	12.08	33.27	6.09		100	12.01	33.26	6.02		25.26	272.1	0.320
118	11.61	33.18	5.91		150	10.66	33.12	6.16		25.40	258.5	0.455
147	10.74	33.12	6.16		200	9.18	33.48	4.36		25.91	210.1	0.573
193	9.30	33.43	4.49		250	8.40	33.82	3.90		26.31	172.1	0.671
253	8.34	33.85	3.87		300	7.80	34.07	2.70		26.59	145.0	0.752
341	7.36	34.13	2.13		400	6.72	34.11	1.69		26.78	127.3	0.894
453	6.14	34.10	1.34		500	5.72	34.11	1.12		26.91	115.2	1.022
602	4.86	34.16	0.69		600	4.88	34.16	0.67		27.05	102.2	1.137
812	4.16	34.37	0.32		700	4.51	34.28	0.45		27.18	89.1	1.240
1050	3.48	34.45	0.44		800	4.20	34.36	0.35		27.29	79.6	1.332
1339	2.92	34.51	0.82		1000	3.62	34.43	0.41		27.40	68.9	1.497
					1200	3.17	34.47	0.64		27.47	61.9	1.645

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

BLACK DOUGLAS; August 13, 1955; 1044, 2030 GCT; 38°34'N, 136°07'W; sounding, 2780 fm; wind, 344°, force 2; weather, overcast; sea, moderate; wire angle, 02°, 00°. 39

0	18.82	33.45	5.49	0	18.82	33.45	5.49	23.90	401.1	0.000
9	18.81	33.43	5.60	10	18.80	33.43	5.62	23.90	401.9	0.040
24	18.09	33.44	5.75	20	18.50	33.43	5.68	23.97	394.5	0.080
47	14.04	33.40	6.83	30	17.10	33.43	6.08	24.31	362.2	0.118
57	13.06	33.37	6.55	50	13.69	33.39	6.78	25.03	293.8	0.184
66	12.54	33.39	6.45	75	12.20	33.35	6.53	25.30	268.0	0.255
76	12.12	33.35	6.55	100	11.61	33.36	6.30	25.41	257.9	0.321
95	11.76	33.35	6.37	150	10.63	33.49	5.94	25.69	230.7	0.445
118	11.10	33.38	6.08	200	8.82	33.70	5.30	26.15	187.5	0.551
145	10.76	33.49	5.98	250	8.41	33.88	4.59	26.36	167.9	0.642
192	8.98	33.59	5.39	300	7.52	33.90	3.73	26.51	153.7	0.725
258	8.34	33.89	4.39	400	5.92	33.93	2.88	26.74	130.6	0.872
356	6.45	33.91	3.18	500	5.11	34.01	2.38	26.90	116.0	1.001
479	5.07u	33.94u	2.09u	600	4.46	34.10	1.70	27.05	102.1	1.116
655	4.28	34.15	0.88	700	4.21	34.17	1.22	27.13	94.4	1.221
				800	4.06	34.22	0.99	27.17	90.1	1.320
0	18.89u	33.45u	5.55u	1000	3.54	34.36	0.58	27.36	73.3	1.498
464	5.44u	34.04u	0.33r	1200	3.03	34.47	0.54	27.49	60.2	1.648
633	4.33	34.13	2.01u	1500	2.45	34.58	0.99	27.62	47.5	1.835
892	3.91	34.26	1.09	2000	1.94	34.62	1.70	27.70	40.3	2.099
1027	3.46	34.38	0.55	2500	1.75	34.65	2.10	27.74	36.7	2.339
1262	2.88	34.49	0.54	3000	1.60	34.69	2.51	27.78	33.3	2.563
1589	2.31	34.61	1.13	4000	1.50	34.73	3.13	27.82	29.6	2.988
1963	1.96	34.63u	1.53							
2334	1.82	34.62u	1.90							
2798	1.66	34.68	2.35							
3261	1.54	34.69	2.74							
3724	1.50	34.76u	3.09							
4188	1.51	34.74	3.16							
4373	1.51	34.74	3.24							

BLACK DOUGLAS; August 14-15, 1955; 2335, 0019 GCT; 38°34'N, 139°35'W; sounding, 1328 fm; wind, 322°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°, 05°. 40

1	19.96	33.55	6.09	0	(20.00)	(33.55)	(6.09)	(23.69)	(421.5)	(0.000)
10	19.57	33.49	5.84	10	19.57	33.49	5.84	23.74	415.5	0.042
24	16.48	33.47	6.77	20	19.09	33.49	5.92	23.86	405.0	0.083
47	13.32	33.42	7.05	30	15.31	33.46	6.98	24.74	321.7	0.119
62	12.88	33.46	6.84	50	13.20	33.43	7.03	25.15	281.9	0.180
76	12.77	33.40	6.52	75	12.79	33.40	6.54	25.23	275.0	0.250
95	12.46u	33.40u	5.79	100	12.54	33.41	(5.78)	25.28	270.0	0.319
				150	11.20	33.39		25.51	248.8	0.450
95	12.68u	33.44u	a)	200	9.95	33.49		25.80	220.3	0.569
118	12.36	33.44		250	9.22	33.89		26.23	179.5	0.671
145	11.36	33.38		300	8.28	33.95		26.43	160.9	0.759
192	10.09	33.45		400	6.42	33.95		26.69	135.9	0.912
251	9.20	33.89		500	5.18	33.99		26.88	118.2	1.045
339	7.50	33.96		600	4.46	34.08		27.03	103.8	1.162
450	5.70	33.95		700	4.12	34.18		27.15	92.4	1.266
598	4.48	34.08		800	3.83	34.26		27.24	83.8	1.359
807	3.81	34.27		1000	3.33	34.37		27.37	71.8	1.529
1044	3.24	34.38		1200	2.97	34.46		27.48	60.8	1.677
1331	2.78	34.49								

a) One oxygen sample missing on second cast at time of titration; the following values are in order of increasing depth: 5.94, 5.79, 5.49, 5.36, 4.28, 3.39, 2.07, 1.39, 1.69, 1.70. For each value there is a possibility of two different depths.

41 BLACK DOUGLAS; August 15–16, 1955; 2235, 0155 GCT; 38°39'N, 142°59'W; sounding, 3000 fm; wind, 310°, force 4; weather, rain showers; sea, moderate; wire angle, 25°, 27°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	20.6	33.70	4.86		0	20.6	33.70	4.86		23.63	426.9	0.000
8	20.52	33.66	4.80		10	20.50	33.66	4.80		23.62	427.3	0.043
21	19.75	33.68	4.95		20	19.91	33.68	4.91		23.79	411.1	0.085
47	14.76	33.57	5.77		30	18.23	33.65	5.21		24.20	372.1	0.124
56	13.55	33.50	5.87		50	14.33	33.54	5.81		25.02	294.7	0.191
64	12.95	33.53	5.66		75	12.64	33.49	5.64		25.31	267.4	0.262
76	12.63	33.49	5.64		100	12.00	33.54	5.31		25.48	251.6	0.327
91	12.24	33.53	5.34		150	10.90	33.60	5.14		25.73	227.2	0.448
110	11.78	33.54	5.30		200	9.99	33.85	4.82		26.08	193.9	0.555
134	11.31	33.57	5.25		250	9.58	33.99	4.62		26.26	177.2	0.651
175	10.13	33.64	4.89		300	8.72	34.00	3.92		26.40	163.3	0.739
235	9.76	33.98	4.73		400	7.00	33.96	3.22		26.63	142.0	0.897
320	8.35	34.00	3.70		500	5.81	33.98	2.40		26.80	126.0	1.038
437	6.42	33.95u	3.19u		600	4.77	34.05	1.41		26.97	109.9	1.162
608	4.70	34.04u	1.55u		700	4.21	34.13	0.88		27.10	97.4	1.272
					800	3.86	34.20	0.60		27.19	88.7	1.372
0	21.00u	33.62u	4.85u		1000	3.38	34.38	0.36		27.38	70.9	1.546
7	20.69u	33.68u	4.77u		1200	2.97	34.46	0.38		27.48	61.7	1.694
421	6.66	33.97u	2.93u		1500	2.53	34.55	0.65		27.59	50.8	1.887
570	5.04	34.05u	1.42u		2000	2.02	34.61	1.45		27.69	41.8	2.161
711	4.17	34.14	0.76									
877	3.65	34.29	0.48									
1045	3.28	34.40	0.35									
1279	2.83a)	34.48	0.38									
1515	2.52	34.56	0.66									
1778	2.20	34.60	1.06									
2139	1.91	34.61	1.51									

42 HORIZON; August 22, 1955; 1135 GCT; 38°37'N, 146°29'W; sounding, 2900 fm; wind, 180°, force 4; weather, rain; sea, moderate; wire angle, 19°.

OBSERVED						INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L		Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L		σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	21.68	34.00	4.82	0.4		0	21.68	34.00	4.82	0.4		23.57	433.2	0.000
10	21.68	34.02	5.33	0.3		10	21.68	34.02	5.33	0.3		23.59	431.2	0.043
23	19.86	33.96	5.59	0.4		20	21.62	34.02	5.36	0.3		23.59	430.8	0.086
51	14.46	33.96	6.56	0.4		30	17.50	33.96	6.09	0.4		24.62	332.9	0.125
65	13.43	33.94	6.48	0.4		50	14.55	33.96	6.55	0.4		25.29	269.4	0.185
79	12.94	33.93	6.46	0.4		75	13.07	33.94	6.47	0.4		25.57	242.2	0.249
101	11.69	33.84	6.14	0.5		100	11.72	33.84	6.14	0.5		25.76	224.1	0.308
124	11.54	33.89	5.82	0.7		150	10.58	33.89	5.75	0.9		26.00	201.2	0.416
151	10.56	33.89	5.74	0.9		200	10.12	34.11	5.24	1.0		26.25	177.5	0.512
201	10.12	34.11	5.24	1.0		250	9.44	34.12	5.20	1.3		26.38	165.8	0.600
264	9.18	34.11	5.21	1.4		300	8.55	34.09	4.90	1.5		26.49	154.6	0.683
359	7.74	34.04	4.43	1.6		400	7.00	34.00	4.05	1.7		26.65	139.8	0.835
479	5.85	33.99	3.27	2.0		500	5.63	33.99	3.02	2.1		26.83	123.0	0.973
641	4.50	34.08	1.64	2.6		600	4.77	34.05	1.96	2.5		26.97	109.4	1.095
858	3.61	34.27	0.60	2.8		700	4.22	34.12	1.22	2.7		27.09	98.3	1.205
1106	2.98	34.42	0.05u	3.0		800	3.82	34.20	0.68	2.8		27.19	88.1	1.305
1411	2.58	34.47	0.64	3.1		1000	3.22	34.36	0.61	2.9		27.37	71.4	1.478
						1200	2.84	34.44	0.63	3.0		27.47	61.2	1.626

a) Mean value of 2.79 and 2.87°C.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 25, 1955; 0149, 0314 GCT; 38°35'N, 149°59'W; sounding, 2900 fm; wind, 280°, force 1; weather, partly cloudy; sea, slight; wire angle, 02°, 00°. 43

0	22.89	34.22	5.24	0.3	0	22.89	34.22	5.24	0.3	23.39	449.8	0.000
10	22.48	34.23	5.22	0.3	10	22.48	34.23	5.22	0.3	23.52	437.9	0.044
25	22.06	34.28	5.23	0.3	20	22.22	34.27	5.23	0.3	23.62	427.7	0.088
49	15.13	34.05	6.60	0.4	30	21.68	34.27	5.25	0.3	23.78	413.1	0.130
64	13.47	34.05	7.12	0.4	50	14.89	34.05	6.69	0.4	25.28	269.9	0.199
79	12.47	33.96	6.30	0.4	75	12.70	33.97	6.62	0.4	25.68	232.3	0.262
98	11.76	34.02	5.82	0.7	100	11.70	34.02	5.82	0.7	25.90	210.8	0.318
123	11.06	34.02	5.77	0.5	150	10.86	34.13	5.46	0.8	26.14	188.1	0.419
152	10.82	34.14	5.45	1.0	200	10.15	34.22	5.36	1.2	26.34	169.5	0.510
201	10.12	34.22	5.36	1.2	250	9.55	34.19	5.03	1.3	26.42	162.1	0.596
263	9.38	34.18	4.93	1.3	300	8.76	34.15	4.70	1.5	26.51	152.8	0.677
354	7.78	34.10	4.41	1.8	400	7.00	34.06	4.10	2.0	26.70	135.4	0.827
471	5.99	34.02	3.49	2.2	500	5.59	34.03	3.20	2.3	26.86	120.2	0.961
626	4.64	34.13	1.98	2.7	600	4.79	34.12	2.10	2.7	27.03	104.1	1.079
845	3.68	34.26	0.69	3.2	700	4.28	34.17	1.30	2.9	27.12	95.4	1.185
1095	3.04	34.43	0.44u	3.2	800	3.86	34.23	0.84	3.2	27.20	87.4	1.283
1396	2.58	34.57	0.46	3.2	1000	3.23	34.36	0.46	3.2	27.38	70.8	1.455
					1200	2.87	34.48	0.34	3.2	27.51	58.6	1.599
1078	3.07	34.42	0.37u	3.1u	1500	2.46	34.61	0.67	3.2	27.64	46.0	1.781
1321	2.69	34.51	0.34	3.2	2000	1.95	34.67	1.45	2.9	27.74	36.6	2.031
1663	2.27	34.64	0.97	3.1	2500	1.68	34.70	2.50		27.78	32.8	2.251
2053	1.91	34.68	1.69	2.8	3000	1.53	34.72	2.83		27.80	30.9	2.455
2440	1.72	34.70	2.19	2.6u	4000	1.50	34.70	3.50		27.79	31.8	2.877
2923	1.54	34.74r	2.80	2.6u	5000	1.56	34.74	3.66		27.82	29.0	3.321
3407	1.52	34.72	3.21	2.6u								
3893	1.50	34.70	3.49	2.4u								
4381	1.51	34.78r	3.56	2.7u								
4872	1.56	34.74	3.64	2.5u								
5165	1.57	34.73	3.72	3.0u								

BLACK DOUGLAS; August 7, 1955; 2351 GCT; 39°30'N, 124°30'W; sounding, 1160 fm; wind, 345°, force 4; weather, overcast; sea, very rough; wire angle, 35°. 44

0	11.74	32.77			0	11.74	32.77			24.93	303.1	0.000
8	11.66	32.76			10	11.64	32.76			24.94	302.3	0.030
21	11.42	32.76			20	11.44	32.76			24.98	299.0	0.060
45	9.68	32.80			30	11.07	32.77			25.06	291.5	0.090
57	8.80	32.79			50	9.29	32.79			25.37	261.5	0.146
70	8.45	32.83			75	8.37	32.87			25.58	242.0	0.209
87	8.26	33.02			100	8.40	33.24			25.86	215.1	0.266
108	8.52	33.43			150	8.12	33.75			26.30	173.5	0.365
131	8.36	33.61			200	7.31	33.92			26.55	149.6	0.447
170	7.84	33.85			250	6.64	33.99			26.69	135.9	0.520
221	6.96	33.96			300	6.27	34.02			26.76	129.0	0.588
296	6.33	34.02			400	5.52	34.08			26.91	115.3	0.714
391	5.56	34.07			500	5.20	34.21			27.05	101.9	0.829
517	5.17	34.23			600	4.92	34.28			27.14	93.5	0.933
706	4.57	34.33			700	4.58	34.33			27.21	86.4	1.030
918	3.92	34.42			800	4.27	34.37			27.28	79.9	1.121
1198	3.14	34.50			1000	3.68	34.45			27.40	68.9	1.285
					1200	(3.13)	(34.50)			(27.49)	(59.5)	(1.430)

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BLACK DOUGLAS; August 8, 1955; 1509, 1951 GCT; 39°00'N, 125°36'W; sounding, 2200 fm; wind, 278°, force 6; weather, overcast; sea, very rough; wire angle, 10°, 26°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
1	14.06	32.65	5.90		0	(14.07)	(32.65)	(5.90)		(24.39)	(354.9)	(0.000)
10	14.08	32.56	4.28r		10	14.08	32.56	6.02		24.31	362.2	0.036
29	14.05	32.55	6.24		20	14.07	32.55	6.13		24.31	362.3	0.072
54	13.24	32.79	6.43		30	14.07	32.55	6.31		24.31	362.3	0.109
66	12.10	33.03	6.52		50	13.80	32.77	6.39		24.53	341.3	0.179
77	11.87	33.09	6.65		75	11.94	33.09	6.62		25.14	283.2	0.258
90	10.74	32.93	6.40		100	10.45	33.02	6.08		25.36	262.9	0.327
113	10.15	33.20	5.74		150	8.95	33.64	4.47		26.09	193.5	0.442
144	9.09	33.58	4.76		200	8.32	33.91	2.57		26.40	163.8	0.533
167	8.63	33.73	3.65		250	7.62	34.01	2.28		26.57	147.2	0.613
218	8.10	33.98	2.34		300	6.83	34.02	2.05		26.70	135.5	0.686
294	6.92	34.02	2.11		400	5.90	34.10	1.15		26.87	118.4	0.818
400	5.90	34.10	1.15		500	5.35	34.13	0.79		26.97	109.3	0.937
542	5.08	34.15	0.64		600	4.89	34.21	0.43		27.08	99.0	1.048
738	4.41u	34.34u	0.22		700	4.62	34.31	0.31		27.19	88.4	1.148
					800	4.37	34.38	0.26		27.28	79.9	1.240
0	14.19u	32.57u	5.95u		1000	3.79	34.48	0.39		27.42	66.9	1.404
453	6.14u	34.14u	0.96u		1200	3.30	34.56	0.61		27.53	56.7	1.545
612	5.06u	34.25u	0.48u		1500	2.72	34.59	0.86		27.60	49.5	1.731
765	4.45	34.36	0.32u		2000	(2.00)	(34.63)	(1.67)		(27.70)	(40.0)	(2.001)
986	3.81	34.47	0.37									
1209	3.22	34.56	0.63									
1527	2.68	34.59	0.88									
1902	2.12	34.63	1.50									

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BLACK DOUGLAS; August 9, 1955; 0825 GCT; 38°20'N, 127°05'W; sounding, 2390 fm; wind, 320°, force 6; weather, cloudy; sea, very rough; wire angle, 18°.

0	14.13	32.76	5.92		0	14.13	32.76	5.92		24.45	348.7	0.000
9	14.11	32.70	5.77		10	14.12	32.70	5.80		24.42	352.0	0.035
23	14.08	32.72	5.98		20	14.09	32.72	5.89		24.44	350.3	0.070
50	12.94	32.79	6.57		30	13.95	32.73	6.09		24.47	347.0	0.105
63	11.46	32.84	6.26		50	12.94	32.79	6.57		24.72	323.4	0.173
77	10.96	32.86	5.99		75	11.00	32.86	6.02		25.13	283.9	0.249
99	10.56	33.01	5.88		100	10.54	33.01	5.87		25.33	265.0	0.318
122	9.48	33.03	5.64		150	8.88	33.44	4.80		25.94	206.7	0.437
149	8.88	33.44	4.81		200	8.04	33.83	3.34		26.37	166.3	0.532
197	8.06	33.82	3.43		250	7.22	33.97	2.55		26.60	144.3	0.612
258	7.10	33.99	2.49		300	6.61	34.01	2.31		26.72	133.7	0.684
349	6.13	34.04	2.07		400	5.85	34.08	1.52		26.87	118.7	0.815
461	5.57	34.13	1.05		500	5.30	34.15	0.83		27.00	107.2	0.934
614	4.60	34.22	0.47		600	4.67	34.21	0.47		27.11	95.9	1.042
817	3.93	34.35	0.32		700	4.27	34.27	0.32		27.20	87.8	1.141
1049	3.46	34.50	0.48		800	3.97	34.34	0.35		27.29	79.3	1.231
1334	2.88	34.59	0.79		1000	3.56	34.48	0.44		27.44	64.9	1.390
					1200	3.15	34.56	0.61		27.54	55.6	1.528

BLACK DOUGLAS; August 10, 1955; 0330, 0552 GCT; 37°20'N, 129°16.5'W; sounding, 2740 fm; wind, 353°, force 4; weather, cloudy; sea, rough; wire angle, 16°, 26". 47

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	16.33	33.07	4.91r		0	16.33	33.07	(5.92)		24.22	372.0	0.000
8	16.32	33.03	5.92		10	16.35	33.03	5.91		24.18	374.5	0.037
23	16.33	33.04	5.86		20	16.36	33.04	5.88		24.19	374.0	0.075
51	13.00	33.01	6.43		30	16.33	33.04	5.88		24.19	373.6	0.112
61	12.60	33.00	6.20		50	13.20	33.01	6.41		24.84	312.0	0.181
70	12.42	33.02	6.10		75	12.30	33.03	6.03		25.02	294.3	0.257
84	12.00	33.04	5.93		100	11.02	33.22	6.04		25.41	257.9	0.327
102	10.92	33.22	6.03		150	9.21	33.56	3.70		25.98	203.3	0.444
126	9.88	33.22	5.22		200	8.76	33.94	1.91		26.35	168.2	0.538
156	9.08	33.67	3.37		250	8.39	34.08	1.42		26.52	152.4	0.621
207	8.69	33.97	1.87		300	7.95	34.12	1.33		26.62	143.3	0.697
281	8.15	34.11	1.36		400	6.89	34.13	1.33		26.78	128.0	0.839
385	6.93u	34.13u	1.33		500	6.15	34.21	0.71		26.93	113.1	0.966
522	6.00	34.22	0.65		600	5.38	34.26	0.51		27.07	100.3	1.080
707	4.75u	34.33u	1.37r		700	4.87	34.30	0.42		27.16	91.4	1.183
					800	4.51	34.35	0.33		27.24	84.0	1.279
0	16.34u	33.12u	5.84u		1000	3.90	34.49	0.38		27.41	67.6	1.448
8	16.30u	33.04u	5.86u		1200	3.42	34.53	0.58		27.49	60.0	1.594
432	6.64u	34.14u	2.82		1500	2.76	34.58	0.95		27.60	50.1	1.787
584	5.49	34.25	0.53		2000	2.09	34.62	1.50		27.68	42.1	2.065
730	4.83u	34.29u	0.44									
901	4.19	34.42	0.31									
1075	3.70	34.52	0.46									
1330	3.14	34.54	0.77									
1561	2.64	34.59	1.02									
1836	2.26	34.61	1.36									
2210	1.90	34.66	1.80									

BLACK DOUGLAS; August 10, 1955; 2155, 2255 GCT; 36°42'N, 131°22'W; sounding, 2800 fm; wind, 358°, force 4; weather, overcast; sea, rough; wire angle, 02°, 05°. 48

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	17.19	33.15	5.68		0	17.19	33.15	5.68		24.07	385.0	0.000
9	17.06	33.07	5.94		10	17.08	33.07	5.95		24.05	387.3	0.039
24	16.88	33.12	6.02		20	16.94	33.10	6.00		24.10	382.4	0.077
52	12.55	33.05	6.26		30	16.67	33.13	6.08		24.18	375.5	0.115
66	12.21	33.12	6.28		50	12.62	33.05	6.25		24.98	298.8	0.183
80	11.65	33.05	6.26		75	11.84	33.07	6.28		25.14	283.1	0.256
103	11.74	33.30	5.71		100	11.75	33.29	6.27		25.33	265.2	0.325
127	10.34	33.30	5.44		150	9.20	33.40	5.43		25.86	215.0	0.446
156	9.02	33.49u	5.41		200	8.80	33.78	4.38		26.22	180.9	0.547
208	8.70	33.91	4.34		250	8.00	33.99	4.05		26.51	153.4	0.633
273	7.49u	34.03u	3.86		300	7.10	34.00	3.52		26.64	140.9	0.709
372	6.00	33.96	2.84		400	5.68	33.98	2.48		26.81	124.6	0.846
					500	4.99	34.12	1.83		27.01	105.9	0.967
61	12.62u	33.17u	7.02u		600	4.68	34.22	0.43		27.12	95.8	1.074
159	9.01	33.42u	4.71		700	4.42	34.30	0.39		27.21	87.1	1.172
281	7.42u	33.98u	3.77		800	4.13	34.39	0.40		27.32	76.7	1.261
446	5.21	34.05	1.98		1000	3.61	34.47	0.50		27.43	66.0	1.420
666	4.51	34.27	0.39		1200	3.13	34.51	0.70		27.50	58.9	1.562
915	3.82	34.45	0.41									
1214	3.10	34.51	0.74									

49 BLACK DOUGLAS; August 12, 1955; 1404 GCT; 36°53'N, 134°46'W; sounding, 2310 fm; wind, 345°, force 4; weather, rain showers; sea, rough; wire angle, 20°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	19.45	33.77	5.41u		0	19.45	33.77			23.99	393.2	0.000
9	19.44	33.77	5.57u		10	19.47	33.77			23.98	393.9	0.039
22	19.16	33.87	5.53u		20	19.27	33.85			24.10	382.5	0.078
49	15.15	33.76	6.07u		30	18.00	33.84			24.41	353.3	0.115
62	14.68	33.79	6.12u		50	15.10	33.76			25.01	295.7	0.180
76	14.15	33.82	6.05u		75	14.18	33.82			25.26	272.0	0.252
98	13.45	33.78	5.93u		100	13.37	33.77			25.39	259.8	0.319
119	12.34	33.66	5.74u		150	10.77	33.63			25.78	222.6	0.441
146	10.82	33.63	5.46u		200	10.00	33.88			26.10	191.9	0.547
194	10.08	33.85	5.36u		250	9.27	34.05			26.35	168.0	0.639
256	9.16	34.05	4.91u		300	8.10	34.01			26.51	153.7	0.722
350	7.00	33.97	4.08u		400	6.28	33.98			26.73	132.2	0.870
465	5.57	34.00	2.86u		500	5.26	34.02			26.89	117.1	1.000
621	4.44	34.13	1.87u		600	4.56	34.11			27.04	102.5	1.116
832	3.74	34.29	1.42u		700	4.13	34.20			27.16	91.7	1.219
1076	3.24	34.45	1.56u		800	3.83	34.27			27.25	83.6	1.313
1371	2.77	34.54	1.79u		1000	3.38	34.42			27.41	67.8	1.479
					1200	3.03	34.50			27.50	58.8	1.622

50 BLACK DOUGLAS; August 26, 1955; 0047 GCT; 37°47'N, 123°15'W; sounding, 50 fm; wind, 315°, force 6; weather, clear; sea, very rough; wire angle, 03°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	10.85	33.75		a)	0	10.85	33.75			25.85	216.0	0.000
9	10.81	33.77			10	10.82	33.77			25.87	214.0	0.021
14	10.81	33.77			20	10.79	33.78			25.89	212.2	0.043
19	10.79	33.78			30	10.73	33.76			25.88	213.0	0.064
24	10.76	33.77			50	10.24	33.74			25.95	206.2	0.106
28	10.72	33.76										
33	10.70	33.79										
38	10.65	33.74										
47	8.98r	33.76r										
57	9.89	33.75										

51 BLACK DOUGLAS; August 25, 1955; 2217 GCT; 37°43'N, 123°23'W; sounding, 700 fm; wind, 325°, force 6; weather, clear; sea, high; wire angle, 17°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	12.09	33.70	5.67		0	12.09	33.70	5.67		25.58	241.1	0.000
8	12.04	33.70	5.62		10	12.05	33.70	5.60		25.60	239.9	0.024
27	11.94	33.71	5.52		20	11.97	33.71	5.56		25.61	238.2	0.048
36	11.90	33.71	5.59		30	11.92	33.71	5.53		25.63	237.2	0.072
45	11.06	33.68	4.91		50	10.49	33.66	4.63		25.84	216.5	0.117
54	10.03	33.65	4.34		75	9.22	33.77	3.82		26.14	188.2	0.168
63	9.60	33.75	3.69		100	8.70	33.86	2.59		26.30	173.1	0.214
73	9.25	33.76	3.83		150	8.01	34.00	2.10		26.51	152.9	0.297
91	8.96	33.86	2.65		200	7.80	34.09	1.80		26.61	143.6	0.373
113	8.32	33.87	2.51		250	7.44	34.13	1.63		26.69	135.9	0.444
141	8.07	33.96	2.27		300	7.23	34.18	1.30		26.76	129.1	0.513
187	7.88	34.07	1.81		400	6.68	34.17	0.86		26.83	122.5	0.644
250	7.44	34.13	1.63		500	5.98	34.14	0.76		26.91	115.7	0.770
346	7.04	34.19	0.96		600	5.52	34.23	0.64		27.03	104.2	0.887
465	6.18	34.14	0.80		700	5.05	34.30	0.56		27.14	93.6	0.993
608	5.48	34.23	0.68									
753	4.82	34.34	0.52									

a) One oxygen sample missing at time of titration; the following values are in order of increasing depth: 5.95, 5.83, 6.04, 5.66, 5.59, 5.50, 5.72, 5.16, 4.02. For each oxygen value there is a possibility of two different depths.

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

BLACK DOUGLAS; August 25, 1955; 0726, 1035 GCT; 37°17'N, 124°21'W; sounding, 2250 fm; wind, 315°, force 6; weather, clear; sea, high; wire angle, 15°, 30°. 52

0	13.41	33.21	5.00	0	13.41	33.21	5.00	24.95	302.0	0.000
9	13.39	33.20	5.17	10	13.39	33.20	5.20	24.95	301.5	0.030
23	13.32	33.21	5.68	20	13.34	33.21	5.50	24.96	300.0	0.060
50	12.00	33.28	5.65	30	13.32	33.21	5.68	24.96	300.5	0.090
59	10.35	33.01	5.62	50	12.00	33.28	5.65	25.27	270.7	0.148
67	9.74	33.04	5.29	75	9.30	33.06	5.20	25.58	241.5	0.212
81	9.14	33.09	5.10	100	9.23	33.51	4.43	25.94	207.5	0.269
97	9.30	33.49	4.56	150	8.50	33.88	2.59	26.34	169.2	0.364
119	8.54	33.68	3.84	200	7.46	33.98	2.42	26.57	147.2	0.445
144	8.59	33.84	2.64	250	6.72	34.01	2.29	26.70	134.8	0.517
189	7.62	33.97	2.44	300	6.21	34.05	1.94	26.80	126.0	0.584
258	6.60	34.02	2.27	400	5.50	34.07	1.30	26.89	116.4	0.710
354	5.80	34.07	1.43	500	5.11	34.21	0.91	27.06	100.8	0.823
484	5.16	34.20	0.96	600	4.84	34.26	0.50	27.13	94.4	0.927
667	4.70	34.33	0.37	700	4.60	34.35	0.37	27.24	84.0	1.023
				800	4.30	34.41	0.50	27.31	77.5	1.111
0	13.17u	33.04u	5.27u	1000	3.78	34.47	0.62	27.41	68.1	1.273
7	13.15u	33.07u	6.02u	1200	3.26	34.50	0.67	27.48	60.9	1.419
422	5.25u	34.06	1.26	1500	2.62	34.57	1.08	27.60	49.8	1.611
579	4.89	34.25	0.88	2000	2.00	34.62	1.79	27.70	41.0	1.882
728	4.52	34.37	0.38							
903	4.01	34.45	0.70							
1080	3.58a)	34.48	0.58							
1325	2.91	34.52	0.88							
1571	2.52	34.58	1.16							
1843	2.15	34.64u	1.55							
2215	1.85	34.63	2.05							

BLACK DOUGLAS; August 24, 1955; 1727 GCT; 36°49'N, 125°57'W; sounding, 2650 fm; wind, 327°, force 6; weather, overcast; sea, very rough; wire angle, 25°. 53

0	14.95	32.94	5.58	0	14.95	32.94	5.58	24.42	351.7	0.000
8	14.95	32.85	5.58	10	14.94	32.85	5.40	24.35	358.8	0.036
22	14.93	32.84	5.39	20	14.93	32.85	5.39	24.35	358.8	0.071
48	14.49	32.86	5.66	30	14.93	32.84	5.39	24.35	358.8	0.107
60	12.12	32.94	5.92	50	13.84	32.89	5.80	24.62	333.3	0.177
73	11.39	32.97	5.89	75	11.31	32.97	5.88	25.16	281.0	0.254
94	10.68	33.00	5.82	100	10.50	33.01	5.77	25.34	264.3	0.323
116	10.08	33.03	5.52	150	9.48	33.38	5.47	25.80	220.4	0.445
142	9.61	33.30	5.55	200	8.60	33.78	3.05	26.25	178.0	0.547
190	8.74	33.72	3.37	250	8.10	34.00	2.36	26.49	154.8	0.632
250	8.10	34.00	2.36	300	7.47	34.06	1.98	26.64	141.0	0.708
341	6.98	34.10	1.72	400	6.42	34.16	1.38	26.86	120.3	0.844
452	6.04	34.20	1.01	500	5.80	34.23	0.73	27.00	107.1	0.964
607	5.22	34.30	0.36	600	5.25	34.30	0.37	27.11	96.1	1.073
826	4.35	34.43	0.38	700	4.82	34.36	0.36	27.20	87.2	1.171
1071	3.70	34.47	0.45	800	4.44	34.42	0.37	27.30	78.4	1.262
1369	3.00	34.54	0.74	1000	3.87	34.46	0.42	27.39	70.0	1.427
				1200	3.39	34.49	0.55	27.47	62.5	1.577

a) Mean value of 3.54 and 3.63°C.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

54 BLACK DOUGLAS; August 23, 1955; 1736, 1944 GCT; 35°40'N, 127°49'W; sounding, 2650 fm; wind, 348°, force 6; weather, partly cloudy; sea, very rough; wire angle, 04°, 15°.

0	15.92	33.09	5.84	0	15.92	33.09	5.84	24.32	361.5	0.000
9	15.90	33.06	6.05	10	15.90	33.06	6.00	24.30	362.8	0.036
24	15.89	33.13	5.62	20	15.90	33.11	5.75	24.34	359.4	0.072
52	15.14	33.05	5.63	30	15.80	33.13	5.63	24.37	356.1	0.108
62	12.71	33.19	6.14	50	15.20	33.05	5.63	24.45	348.7	0.179
71	11.98	33.21	5.92	75	11.71	33.22	5.84	25.28	269.8	0.257
85	10.97	33.24	5.59	100	9.83	33.29	5.02	25.67	233.1	0.320
103	9.60	33.30	4.95	150	8.80	33.76	3.72	26.20	182.2	0.425
127	9.22	33.59	4.30	200	8.02	33.98	2.72	26.49	154.8	0.511
154	8.72	33.78	3.64	250	7.39	34.02	2.14	26.62	143.0	0.588
205	7.98	33.99	2.65	300	6.83	34.05	1.83	26.71	133.9	0.659
279	7.06	34.04	1.94	400	5.88	34.11	1.32	26.89	116.7	0.789
384	5.99	34.09	1.45	500	4.90	34.17	0.88	27.06	101.7	0.904
516	4.73	34.17	0.88	600	4.56	34.25	0.40	27.15	92.1	1.007
699	4.55	34.38	0.36	700	4.54	34.38	0.40	27.26	82.0	1.100
				800	4.28	34.43	0.37	27.33	75.8	1.187
0	15.95u	33.08u	5.62u	1000	3.73	34.49	0.60	27.43	65.8	1.346
8	15.92u	33.08u	5.37u	1200	3.26	34.54	0.75	27.51	58.0	1.488
445	5.66	34.18	0.92	1500	2.68	34.60	1.20	27.62	48.3	1.674
606	4.55	34.25	0.59	2000	2.02	34.63	1.60	27.70	40.5	1.940
761	4.41	34.42	0.34							
942	3.87	34.47	0.52							
1125	3.44	34.52	0.69							
1378	2.84	34.57	0.92							
1633	2.51	34.61	1.26							
1912	2.11	34.63	1.50							
2287	1.80	34.64	1.97							

55 BLACK DOUGLAS; August 22, 1955; 2010 GCT; 34°51'N, 130°09'W; sounding, 2700 fm; wind, 352°, force 5; weather, overcast; sea, rough; wire angle, 16°.

0	17.18	33.14	5.51	0	17.18	33.14	5.51	24.07	385.0	0.000
8	17.15	33.12	5.60	10	17.18	33.15	5.59	24.08	384.2	0.039
23	17.50	33.50	5.41	20	17.46	33.44	5.44	24.23	370.0	0.076
50	14.31	33.46	5.96	30	17.47	33.50	5.40	24.28	365.4	0.113
63	13.51	33.49	6.01	50	14.31	33.46	5.96	24.96	301.0	0.180
78	13.14	33.53	6.01	75	13.18	33.52	6.04	25.24	274.0	0.252
104	13.17	33.59	5.87	100	13.18	33.59	5.90	25.29	269.2	0.321
122	9.57r	33.43	5.50	150	10.12	33.42	5.12	25.72	228.2	0.447
150	10.12	33.42	5.12	200	9.27	33.79	4.70	26.15	187.6	0.552
198	9.32	33.78	4.70	250	8.48	33.99	4.09	26.43	160.8	0.642
259	8.25	33.99	4.03	300	7.46	33.98	3.69	26.58	147.0	0.721
353	6.56	33.98	3.23	400	5.88	34.01	2.53	26.81	124.8	0.862
468	5.35	34.08	1.76	500	5.25	34.09	1.54	26.97	111.1	0.985
624	4.91	34.17	0.80	600	4.98	34.15	0.79	27.02	104.4	1.099
834	3.99	34.40	0.36	700	4.60	34.24	0.48	27.14	93.3	1.204
1076	3.40	34.50	0.53	800	4.13	34.36	0.36	27.29	79.6	1.298
1369	2.84	34.57	0.98	1000	3.57	34.48	0.47	27.44	65.5	1.459
				1200	3.15	34.54	0.68	27.53	56.4	1.598

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

BLACK DOUGLAS; August 20, 1955; 1859, 2111 GCT; 34°51'N, 133°27'W; sounding, 2850 fm; wind, 356°, force 4; weather, cloudy; sea, moderate; wire angle, 12°, 20°. 56

0	18.63	33.66	4.92	0	18.63	33.66	4.92	24.11	381.4	0.000
8	18.60	33.64	4.89	10	18.59	33.64	4.84	24.11	381.8	0.038
23	18.25	33.64	4.79	20	18.31	33.64	4.78	24.18	375.0	0.076
49	15.86	33.65	5.39	30	18.12	33.64	4.79	24.22	370.5	0.113
58	14.90	33.59	5.54	50	15.80	33.65	5.37	24.78	318.0	0.183
67	14.54	33.61	5.45	75	14.48	33.69	5.40	25.10	287.5	0.259
80	14.42	33.75	5.33	100	13.79	33.77	5.37	25.30	268.2	0.329
98	13.83	33.77	5.38	150	11.62	33.54	5.07	25.55	244.2	0.458
121	12.94	33.59	5.35	200	9.79	33.78	4.86	26.06	195.8	0.571
148	11.68	33.54	5.09	250	9.26	34.02	4.51	26.33	169.8	0.664
198	9.81	33.77	4.90	300	8.50	34.04	4.08	26.47	156.9	0.749
270	9.05	34.04	4.39	400	6.53	34.04	3.32	26.74	130.9	0.898
369	6.96	34.04	3.44	500	5.32	34.02	2.57	26.89	117.2	1.028
500	5.32	34.02	2.57	600	4.80	34.12	1.94	27.03	104.1	1.145
679	4.38	34.20	1.28	700	4.32	34.21		27.15	92.8	1.250
				800	4.08	34.27		27.22	86.0	1.347
0	-	33.62u	5.19u	1000	3.65	34.41		27.36	72.6	1.520
8	18.59u	33.76u	4.98u	1200	3.21	34.48		27.47	62.0	1.672
429	6.22	33.97u	3.27	1500	2.61	34.54		27.57	52.6	1.870
583	4.88	34.09	2.08	2000	2.02	34.61		27.69	41.8	2.150
728	4.26	34.22	1.68r							
901	3.84	34.36	1.07r							
1073	3.50	34.45	1.25r							
1314	2.92	34.44r	0.98r							
1554	2.53	34.55	1.19r							
1820	2.19	34.61	1.40r							
2184	1.85	34.61	1.81r							

BLACK DOUGLAS; August 19, 1955; 1341, 1558 GCT; 34°51'N, 136°45'W; sounding, 2780 fm; wind, 320°, force 2; weather, overcast sea, moderate; wire angle, 06°, 08°. 57

0	19.85	34.20	4.85	0	19.85	34.20	4.85	24.21	372.0	0.000
9	19.84	34.20	4.94	10	19.86	34.20	4.92	24.21	371.8	0.037
24	19.83	34.16	4.89	20	19.85	34.18	4.90	24.19	374.0	0.075
52	17.22	34.22	5.29	30	19.73	34.16	4.87	24.21	371.7	0.112
62	17.05	34.23	5.33	50	17.30	34.22	5.18	24.87	309.7	0.180
70	16.45	34.14	5.32	75	16.10	34.08	5.33	25.04	292.9	0.256
84	15.72	34.04	5.35	100	15.46	34.08	5.29	25.18	279.0	0.328
102	15.42	34.09	5.28	150	14.87	34.10	5.07	25.33	265.7	0.466
126	15.24	34.14	5.13	200	11.62	33.78	4.80	25.74	226.6	0.592
154	14.62	34.07	5.04	250	9.63	33.91	4.20	26.18	184.4	0.697
205	11.38	33.78	4.76	300	8.18	34.01	3.80	26.49	154.9	0.784
278	8.72	33.98	3.94	400	6.61	34.04	2.99	26.74	131.8	0.933
380	6.84	34.04	3.14	500	5.61	34.04	1.77	26.87	119.6	1.064
516	5.43	34.04	1.58	600	4.90	34.10	0.80	27.00	106.5	1.184
699	4.52	34.25	0.68	700	4.51	34.25	(0.61)	27.16	91.5	1.290
				800	4.16	34.37		27.29	79.0	1.382
0	21.32u	34.17u	5.35r	1000	3.54	34.44		27.41	68.1	1.545
9	19.89u	34.22u	5.30r	1200	3.04	34.51		27.52	57.9	1.688
469	6.00	34.04	3.34r	1500	2.51	34.62		27.65	45.5	1.869
633	4.72	34.14	1.74r	2000	1.93	34.68		27.75	35.9	2.117
788	4.20	34.36	1.39r							
971	3.62	34.43	1.15r							
1155	3.14	34.49	1.32r							
1409	2.64	34.60	1.42r							
1665	2.28	34.69	1.89r							
1945	1.98	34.79r	3.06r							
2323	1.76	34.69	2.82r							

58 BLACK DOUGLAS; August 18, 1955; 1245 GCT; 34°52'N, 140°04'W; sounding, 1160 fm; wind, 240°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	21.07	34.16	5.05		0	21.07	34.16	5.05		23.86	405.1	0.000
9	21.02	34.11	5.00		10	21.02	34.11	5.00		23.83	408.0	0.041
24	19.76	34.15	5.22		20	20.38	34.14	5.11		24.02	390.2	0.081
47	16.40	34.14	5.68		30	18.94	34.15	5.33		24.41	352.5	0.118
62	15.69	34.07	6.42		50	16.17	34.11	5.94		25.05	291.5	0.183
76	15.42	34.09	5.74		75	15.44	34.09	5.81		25.19	278.4	0.254
94	15.26	34.08	5.60		100	15.13	34.06	5.59		25.24	273.4	0.324
117	14.35	33.96	5.55		150	12.89	33.76	5.51		25.48	251.5	0.457
145	13.11	33.78	5.52		200	10.95	33.71	5.03		25.81	220.0	0.577
192	11.10	33.70	5.07		250	10.09	33.99	4.82		26.17	185.5	0.681
251	10.05	33.99	4.82		300	9.20	34.07	4.48		26.38	165.5	0.772
340	8.42	34.07	4.18		400	7.27	34.03	3.76		26.64	140.7	0.931
451	6.21	34.00	3.17		500	5.65	34.01	2.60		26.84	121.9	1.068
601	4.74	34.09	1.43		600	4.75	34.09	1.43		27.00	106.2	1.189
811	3.96	34.29	0.50		700	4.31	34.19	0.82		27.12	94.9	1.296
1050	3.45	34.42	0.38		800	3.99	34.28	0.51		27.24	84.0	1.393
1337	2.94	34.54	0.88		1000	3.54	34.40	0.38		27.37	71.5	1.564
					1200	3.18	34.48	0.53		27.48	61.6	1.714

59 BLACK DOUGLAS; August 17, 1955; 0943, 1152 GCT; 34°53'N, 143°23'W; sounding, 2520 fm; wind, 295°, force 2; weather, overcast; sea, moderate; wire angle, 00°, 02°.

0	21.66	34.36	5.00		0	21.66	34.36	5.00		23.84	406.8	0.000
9	21.64	34.40	4.94		10	21.64	34.40	4.93		23.88	402.9	0.041
24	21.09	34.51	5.06		20	21.38	34.48	4.98		24.02	390.4	0.080
52	16.74	34.25	5.63		30	20.57	34.50	5.14		24.25	367.5	0.118
62	16.37	34.23	5.67		50	17.01	34.27	5.60		24.97	299.4	0.185
71	15.99	34.23	5.56		75	15.88	34.23	5.56		25.21	276.9	0.258
85	15.60	34.20	5.58		100	14.94	34.07	5.54		25.29	269.0	0.327
104	14.72	34.04	5.55		150	12.58	33.88	5.68		25.63	236.9	0.455
128	13.54	34.02	5.74		200	11.02	33.94	5.27		25.97	204.6	0.567
157	12.32	33.86	5.65		250	10.45	34.07	4.96		26.18	184.5	0.667
209	10.88	33.97	5.20		300	9.79	34.13	4.62		26.32	171.0	0.759
285	10.02	34.13	4.72		400	7.85	34.02	3.97		26.54	150.0	0.926
387	8.13	34.03	4.08		500	5.99	33.98	3.03		26.78	127.5	1.071
524	5.68	34.00	2.74		600	4.97	34.02	1.80		26.93	113.8	1.199
706	4.44	34.14	0.91		700	4.47	34.13	0.89		27.07	99.9	1.312
					800	4.03	34.27	0.38		27.23	85.2	1.412
0	21.64u	34.18u	5.05u		1000	3.51	34.41	0.42		27.39	69.6	1.583
9	21.60u	34.37u	5.28u		1200	3.10	34.47	0.63		27.49	61.0	1.731
470	6.34	33.96	3.42		1500	2.52	34.53	1.13		27.58	52.2	1.927
639	4.63	34.03	1.34		2000	1.98	(34.66)	1.82		(27.73)	(37.7)	(2.196)
799	4.03	34.27	0.38		2500	(1.60)						
986	3.53	34.40	0.43									
1173	3.16	34.47	0.58									
1431	2.62	34.52	1.02									
1689	2.29	34.60	1.30									
1970	2.00	34.68u	1.78									
2346	1.76	34.67u	2.10									

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

HORIZON; August 23, 1955; 1745 GCT; 35°08'N, 148°00'W; sounding, 3000 fm; wind, 045°, force 2; weather, partly cloudy; sea, moderate; wire angle, 10°. 60

0	23.59	34.56	5.05	0.3	0	23.59	34.56	5.05	0.3	23.45	444.3	0.000
10	23.58	34.63	5.11	0.3	10	23.58	34.63	5.11	0.3	23.50	439.2	0.044
25	22.44	34.52	5.28	0.2	20	23.47	34.65	5.18	0.3	23.55	434.9	0.088
54	16.68	34.18	6.14	0.3	30	21.45	34.43	5.38	0.2	23.96	395.8	0.130
69	15.22	34.23	6.45	0.3	50	17.30	34.19	6.01	0.3	24.84	312.1	0.201
83	13.94	34.12	6.44	0.4	75	14.72	34.19	6.45	0.3	25.44	255.3	0.272
108	12.64	34.09	6.10	0.6	100	13.04	34.09	6.23	0.5	25.70	229.9	0.333
131	11.86	34.16	5.79	0.8	150	11.41	34.13	5.61	1.0	26.05	197.2	0.442
159	11.24	34.13	5.56	1.0	200	10.79	34.19	5.49	1.1	26.21	181.5	0.539
210	10.68	34.20	5.48	1.1	250	10.15	34.20	5.30	1.2	26.32	170.8	0.629
277	9.77	34.19	5.15	1.3	300	9.38	34.17	5.00	1.4	26.43	160.5	0.715
376	8.03	34.07	4.42	1.7	400	7.55	34.04	4.20	1.8	26.61	143.7	0.874
498	5.76	33.98	3.16	2.4	500	5.75	33.98	3.16	2.4	26.81	124.7	1.015
662	4.42	34.14	1.33	3.0	600	4.79	34.08	1.71	2.9	27.00	106.3	1.137
883	3.57	34.29	0.45	3.0	700	4.23	34.17	1.11	3.0	27.12	95.1	1.244
1138	3.11	34.47	0.42	3.3	800	3.82	34.23	0.70	3.0	27.22	86.2	1.341
1446	2.58	34.60	0.74	3.3	1000	3.35	34.36	0.42	3.1	27.37	72.1	1.513
					1200	3.00	34.50	0.46	3.3	27.51	58.1	1.659

HORIZON; August 24, 1955; 0241 GCT; 35°07'N, 149°40'W; sounding, 3000 fm; wind, 090°, force 3; weather, partly cloudy; sea, moderate; wire angle, 08°. 61

0	24.40	35.01	4.93	0.2	0	24.40	35.01	4.93	0.2	23.55	434.8	0.000
10	23.88	34.98	4.85	0.3	10	23.88	34.98	4.85	0.3	23.67	423.3	0.043
25	23.10	35.00	5.17	0.3	20	23.39	34.99	5.05	0.3	23.83	408.2	0.084
55	16.84	34.40	5.72	0.3	30	21.90	34.89	5.32	0.3	24.18	374.8	0.124
71	16.24	34.42	6.25	0.3	50	17.13	34.41	5.59	0.3	25.05	292.2	0.191
85	15.60	34.38	5.95	0.4	75	16.07	34.41	6.17	0.3	25.30	267.8	0.261
109	14.62	34.34	5.98	0.4	100	15.00	34.35	5.98	0.4	25.49	249.8	0.327
134	13.18	34.42u	5.55	0.6	150	12.49	34.19	5.36	0.7	25.89	212.1	0.444
162	12.09	34.18	5.22	0.8	200	11.37	34.20	5.03	0.9	26.10	191.9	0.547
215	11.14	34.20	5.00	0.9	250	10.66	34.20	5.09	1.0	26.23	179.4	0.642
281	10.25	34.19	5.15	1.2	300	9.98	34.18	5.03	1.3	26.34	169.5	0.732
380	8.54	34.11	4.32	1.6	400	8.17	34.09	4.19	1.7	26.56	148.8	0.898
505	6.14	34.00	3.44	2.1	500	6.24	34.00	3.51	2.1	26.76	129.7	1.044
672	4.56	34.09	1.59	2.8	600	5.09	34.03	2.36	2.5	26.92	114.3	1.173
897	3.68	34.29	0.45	3.2	700	4.44	34.11	1.40	2.9	27.05	102.0	1.288
1152	3.11	34.42	0.35	3.2	800	4.03	34.20	0.87	3.1	27.17	90.7	1.391
1457	2.66	34.56	0.77	3.1u	1000	3.42	34.33	0.35	3.2	27.35	75.2	1.571
1739	2.28	34.68u	1.14	3.1	1200	3.03	34.45	0.38	3.2	27.47	62.0	1.724
2034	1.97	34.67	1.71	3.0	1500	2.60	34.58	0.83	3.2	27.61	49.2	1.916
2433	1.70	34.64u	2.23	2.9	2000	1.99	34.67	1.60	3.0	27.73	37.3	2.178

BLACK DOUGLAS; August 30, 1955; 1236 GCT; 36°03'N, 122°02'W; sounding, 635 fm; wind, 310°, force 5; weather, clear; sea, very rough; wire angle, 03°. 62

0	10.73	33.69	4.72		0	10.73	33.69	4.72		25.82	218.1	0.000
9	10.73	33.69	4.68		10	10.73	33.69	4.66		25.83	218.0	0.022
28	10.60	33.69	4.57		20	10.67	33.69	4.61		25.84	216.9	0.044
38	10.58	33.71	4.54		30	10.60	33.70	4.54		25.85	215.7	0.065
47	10.52	33.65	4.40		50	10.51	33.66	4.42		25.84	216.3	0.109
57	10.44	33.69	4.41		75	8.80	33.76	3.06		26.20	182.2	0.159
66	9.02	33.73	3.76		100	8.40	33.86	2.55		26.34	169.0	0.203
76	8.79	33.93r	3.04		150	8.31	34.10	2.47		26.54	149.9	0.284
95	8.46	33.84	2.61		200	7.85	34.18	2.25		26.67	137.6	0.358
119	8.18	33.96	2.24		250	7.60	34.21	1.48		26.73	131.7	0.427
147	8.33	34.09	1.78		300	7.39	34.27	0.95		26.81	124.8	0.493
193	7.92	34.17	2.23		400	6.79	34.30	0.74		26.92	114.0	0.618
258	7.57	34.22	1.33		500	5.93	34.30	0.83		27.04	103.5	0.734
355	7.13	34.30	0.72		600	5.49	34.33	0.60		27.11	96.0	0.841
474	6.04	34.30	0.82		700	4.99	34.38	0.54		27.21	86.7	0.941
618	5.40	34.34	0.58									
764	4.69	34.45	0.53									

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BLACK DOUGLAS; August 31, 1955; 0146, 0426 GCT; 35°33'N, 123°06'W; sounding, 2070 fm; wind, 312°, force 6; weather, clear; sea, very rough; wire angle, 25°, 19°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	13.16	33.71	5.64		0	13.16	33.71	5.64		25.39	259.8	0.000
8	13.14	33.73	5.83		10	13.14	33.73	5.84		25.40	258.1	0.026
22	13.11	33.74	-		20	13.12	33.74	5.83		25.42	257.0	0.052
48	10.38	33.78	3.70		30	13.11	33.74	5.83		25.42	257.0	0.078
56	9.90	33.76	3.29		50	10.25	33.78	3.62		25.98	204.0	0.124
65	9.46	33.83	2.96		75	9.10	33.86	2.65		26.24	179.5	0.172
77	9.04	33.87	2.61		100	8.64	33.98	2.30		26.39	164.1	0.215
95	8.68	33.94	2.35		150	8.03	34.11	1.75		26.59	145.6	0.294
116	8.56	34.01	2.09		200	7.92	34.19	1.38		26.68	137.7	0.366
142	8.06	34.09	1.86		250	7.33	34.16	1.40		26.74	131.7	0.435
187	8.01	34.19	1.40		300	6.94	34.19	1.16		26.81	124.2	0.502
254	7.24	34.16	1.40		400	6.36	34.25	0.82		26.94	112.8	0.626
346	6.66	34.22	0.94		500	5.78	34.34	0.73		27.08	99.2	0.737
472	5.86u	34.33	0.75		600	5.20	34.35	0.38		27.16	91.4	0.839
650	4.98	34.44	0.59		700	4.77	34.44	0.57		27.28	79.5	0.932
					800	4.38	34.45	0.56		27.33	75.3	1.018
0	13.09u	33.74u	5.82u		1000	3.86	34.52	0.76		27.44	64.6	1.175
451	6.08u	34.28	0.78		1200	3.38	34.55	0.99		27.52	57.9	1.316
613	5.14	34.36	0.38		1500	2.74	34.58	1.10		27.60	50.4	1.506
768	4.48	34.44	0.52		2000	2.02	34.61	1.65		27.68	41.9	1.782
990	3.88	34.52	0.72		2500	1.74	34.66	2.05		27.74	36.3	2.023
1209	3.36	34.55	0.96		3000	1.64	34.68	2.40		27.76	34.5	2.249
1516	2.72	34.58	1.10									
1870	2.18	34.67r	1.78u									
2228	1.80	34.63	1.80u									
2685	1.72	34.67	2.28									
3145	1.61	34.68	2.48									
3239	1.58	34.74	2.67									

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BLACK DOUGLAS; August 31, 1955; 2200 GCT; 34°53'N, 124°30'W; sounding, 2460 fm; wind, 320°, force 6; weather, partly cloudy; sea, very rough; wire angle, 13°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	14.62	33.15	5.53		0	14.62	33.15	5.53		24.64	330.2	0.000
8	14.60	33.12	5.81		10	14.60	33.12	5.75		24.64	331.4	0.033
23	14.51	33.17	5.53		20	14.57	33.17	5.55		24.67	327.9	0.066
50	12.62	33.18	5.47		30	14.52	33.18	5.50		24.68	326.1	0.099
64	11.38	33.10	5.72		50	12.62	33.18	5.47		25.08	289.0	0.161
79	9.92	32.93	5.09		75	10.19	32.95	5.28		25.34	264.3	0.230
101	9.43	33.26	4.36		100	9.48	33.26	4.35		25.70	229.5	0.292
125	8.89	33.48	3.38		150	8.79	33.84	3.27		26.27	176.1	0.395
153	8.72	33.87	3.23		200	8.00	33.98	2.36		26.49	154.7	0.479
203	7.95	33.98	2.35		250	7.19	33.99	1.82		26.62	142.7	0.555
268	6.96	34.00	1.69		300	6.67	34.04	1.49		26.73	132.2	0.626
364	6.29	34.11	-		400	6.12	34.15	1.01		26.89	117.1	0.756
483	5.66	34.23	0.64		500	5.58	34.24	0.54		27.03	103.7	0.872
645	4.72	34.32	0.46		600	4.99	34.29	0.46		27.14	92.8	0.977
861	4.07	34.44	1.51r		700	4.53	34.35	0.49		27.24	84.2	1.072
1108	3.45	34.52	0.91		800	4.23	34.41	0.61		27.31	76.8	1.160
1404	2.86	34.57	1.05		1000	3.71	34.49	0.81		27.44	65.5	1.319
					1200	3.26	34.54	0.98		27.51	58.0	1.459

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

BLACK DOUGLAS; September 1, 1955; 1727, 1937 GCT; 34°13'N, 125°54'W; sounding, 2640 fm; wind, 335°, force 4; weather, partly cloudy; sea, very rough; wire angle, 03°, 05°. 65

0	14.53	33.02	5.04	0	14.53	33.02	5.04	24.57	337.5	0.000
9	14.49	32.99	5.30	10	14.49	32.99	5.27	24.56	338.8	0.034
24	14.44	33.01	5.15	20	14.45	33.01	5.20	24.58	337.1	0.068
52	13.16	33.20	6.16	30	14.42	33.02	5.18	24.59	335.9	0.101
62	12.21	33.22	5.38	50	13.70	33.15	5.72	24.85	311.3	0.166
71	11.81	33.17	5.65	75	11.74	33.20	5.63	25.26	271.8	0.240
85	11.56	33.24	5.49	100	11.12	33.29	5.29	25.45	254.0	0.306
104	10.92	33.31	5.26	150	9.12	33.63	3.75	26.06	196.0	0.420
128	9.56	33.42	4.61	200	8.26	33.93	2.74	26.41	162.2	0.511
156	9.01	33.69	3.57	250	7.66	34.06	2.16	26.61	143.5	0.590
207	8.16	33.96	2.67	300	7.23	34.12	1.78	26.72	133.2	0.661
281	7.38	34.11	1.87	400	6.40	34.17	1.21	26.87	119.2	0.793
382	6.54	34.16	1.01u	500	5.74	34.30	0.83	27.06	101.5	0.909
517	5.64	34.31	0.50u	600	5.15	34.30	0.60	27.12	95.0	1.014
701	4.74	34.37	0.55	700	4.75	34.37	0.57	27.23	85.2	1.111
				800	4.44	34.42	0.58	27.30	78.0	1.201
0	14.72u	32.98u	5.72u	1000	3.83	34.46	0.68	27.40	69.2	1.365
9	14.65u	32.99u	5.75u	1200	3.33	34.52	0.78	27.50	59.5	1.511
464	5.96	34.21	1.16u	1500	2.70	34.60	1.08	27.61	48.4	1.700
633	5.00	34.30	0.81u	2000	2.05	34.65	1.75	27.71	39.1	1.964
793	4.47	34.42	0.59							
980	3.88	34.45	0.67							
1167	3.42	34.51	0.78							
1426	2.82	34.59	1.05							
1684	2.44	34.58u	1.34							
1964	2.08	34.65	1.72							
2344	1.80	34.67	2.17							

BLACK DOUGLAS; September 2, 1955; 0902 GCT; 33°33'N, 127°16.5'W; sounding, 2500 fm; wind, 335°, force 5; weather, partly cloudy; sea, very rough; wire angle, 14°. 66

0	16.73	33.35	5.24	0	16.73	33.35	5.24	24.33	360.2	0.000
9	16.72	33.34	5.47	10	16.71	33.34	5.46	24.32	360.9	0.036
23	16.73	33.34	5.41	20	16.70	33.34	5.42	24.32	360.9	0.072
50	15.00	33.24	5.90	30	16.72	33.34	5.41	24.32	360.9	0.108
64	12.86	33.14	5.88	50	15.00	33.24	5.90	24.64	331.2	0.178
78	11.90	33.11	5.83	75	12.08	33.11	5.84	25.13	284.0	0.255
101	11.12	33.19	5.41	100	11.12	33.19	5.42	25.37	261.9	0.324
124	9.57	33.15	4.97	150	9.10	33.52	4.33	25.96	204.9	0.442
153	9.05	33.55	4.24	200	8.40	33.90	3.72	26.37	166.3	0.536
203	8.35	33.91	3.64	250	7.65	33.99	2.40	26.56	148.5	0.617
266	7.41	34.01	2.08	300	6.98	34.03	1.74	26.68	136.6	0.690
362	6.34	34.07	1.33	400	6.07	34.16	0.95	26.90	115.6	0.822
475	5.73	34.22	0.66	500	5.60	34.22	0.61	27.02	105.3	0.939
633	4.50	34.27	0.41	600	4.75	34.25	0.44	27.14	93.8	1.045
844	3.98	34.38	0.66	700	4.28	34.30	0.50	27.22	86.1	1.141
1085	3.40	34.52	0.91	800	4.08	34.35	0.61	27.28	80.0	1.231
1379	2.87	34.56	1.19	1000	3.60	34.48	0.84	27.44	65.2	1.392
				1200	3.17	34.55	1.02	27.53	56.4	1.530

67 BLACK DOUGLAS; September 2-3, 1955; 2237, 0056 GCT; 33°04'N, 128°45'W; sounding, 2800 fm; wind, 340°, force 4; weather, cloudy; sea, very rough; wire angle, 13°, 11°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δT $10^5 cm^3/g$	ΔD dyn. m
0	17.27	33.21	5.04		0	17.27	33.21	5.04		24.10	382.2	0.000
8	17.22	33.19	5.20		10	17.22	33.19	5.23		24.10	382.7	0.038
23	17.21	33.21	5.36		20	17.21	33.20	5.30		24.11	381.3	0.077
51	15.83	33.46	5.65		30	17.21	33.21	5.40		24.12	380.8	0.115
60	14.93	33.47	3.89r		50	15.97	33.45	5.64		24.58	336.4	0.187
69	14.02	33.52	5.59		75	13.89	33.56	5.58		25.12	285.2	0.265
84	13.73	33.58	5.55		100	13.40	33.57	5.50		25.22	275.2	0.336
102	13.38	33.57	5.49		150	10.85	33.53	4.70		25.68	232.0	0.464
125	12.62	33.58	4.75		200	9.35	33.77	4.05		26.12	190.4	0.571
153	10.64	33.53	4.69		250	8.43	33.98	3.54		26.43	160.8	0.661
203	9.30	33.78	4.02		300	7.53	34.02	3.08		26.60	145.2	0.740
275	8.02	34.02	3.31		400	6.07	34.02	2.40		26.79	126.4	0.882
375	6.38	34.02	2.57		500	5.30	34.12	0.98		26.96	110.1	1.006
509	5.24	34.13	0.94		600	4.73	34.19	0.82		27.08	98.8	1.116
691	4.42	34.26	0.43		700	4.39	34.27	0.44		27.19	89.0	1.217
					800	4.07	34.32	0.41		27.26	81.7	1.309
0	17.24u	33.21	5.14u		1000	3.62	34.45	0.73		27.41	68.0	1.474
9	17.21u	33.21u	4.97u		1200	3.18	34.49	0.70		27.49	60.2	1.619
457	5.58	34.06	1.60		1500	2.58	34.58	1.25		27.62	48.1	1.807
620	4.65	34.20	0.80		2000	1.98	34.64	1.67		27.71	39.8	2.069
775	4.13	34.31	0.41									
958	3.72	34.42	0.75									
1142	3.32	34.49	0.64									
1395	2.71	34.51	1.18									
1651	2.41	34.61	1.32									
1932	2.06	34.63	1.67									
2314	1.79	34.67	1.97									

68 BLACK DOUGLAS; August 21, 1955; 1705 GCT; 33°02'N, 132°15'W; sounding, 2276 fm; wind, 357°, force 5; weather, overcast; sea, rough; wire angle, 15°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δT $10^5 cm^3/g$	ΔD dyn. m
0	18.59	33.87	4.36		0	18.59	33.87	4.36		24.28	364.6	0.000
9	18.54	33.86	4.95		10	18.55	33.86	4.95		24.28	364.5	0.037
23	18.56	33.87	4.95		20	18.54	33.86	4.95		24.29	364.0	0.073
50	17.28	34.13	5.33		30	18.50	33.91	5.00		24.34	359.8	0.109
62	16.77	34.14	5.30		50	17.28	34.13	5.33		24.80	315.6	0.177
77	16.50	34.14	5.30		75	16.55	34.14	5.30		24.98	298.6	0.254
98	16.09	34.18	5.26		100	16.08	34.18	5.26		25.13	284.6	0.328
120	15.94	34.22	5.11		150	14.99	34.05	5.17		25.26	271.9	0.469
146	15.23	34.09	5.19		200	11.42	33.69	4.72		25.69	230.5	0.597
195	11.68	33.69	4.75		250	9.65	33.85	4.47		26.13	189.0	0.704
256	9.50	33.86	4.43		300	8.51	33.92	4.00		26.37	166.3	0.795
349	7.49	33.96	3.31		400	6.73	33.99	2.65		26.69	136.3	0.953
464	6.01	34.04	1.91		500	5.77	34.10	1.45		26.90	116.4	1.085
621	4.93	34.25	0.61		600	5.03	34.23	0.68		27.08	99.0	1.200
834	4.18	34.33	0.46		700	4.61	34.29	0.50		27.17	90.4	1.302
1079	3.50	34.49	0.60		800	4.28	34.32	0.47		27.24	84.1	1.396
1375	2.88	34.54	1.00		1000	3.72	34.43	0.58		27.39	70.2	1.566
					1200	3.23	34.52	0.78		27.50	59.0	1.713

BLACK DOUGLAS; September 7, 1955; 0016 GCT; 34°19'N, 120°48'W; sounding, 370 fm; wind, 305°, force 5; weather, partly cloudy; sea, rough; wire angle, 07°. 69

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	14.3u	33.69u	5.96		0	(13.9)	(33.68)	5.96		25.20	277.7	0.000
9	13.92	33.66	5.84		10	13.92	33.66	5.82		25.19	278.8	0.028
28	13.85	33.64	5.75		20	13.90	33.65	5.78		25.19	278.8	0.056
38	13.74	33.62	5.77		30	13.84	33.64	5.75		25.19	278.8	0.084
47	13.33	33.63	5.62		50	12.85	33.64	5.32		25.39	259.5	0.138
56	11.50a)	33.65	4.47		75	9.84	33.69	3.74		25.98	204.0	0.196
65	10.08	33.69	4.09		100	9.09	33.80	3.40		26.19	183.5	0.245
75	9.84	33.69	3.74		150	8.85	33.97	3.23		26.36	167.5	0.334
84	9.62	33.75	3.58		200	8.27	34.09	1.95		26.54	150.8	0.415
94	9.23	33.78	3.61		250	7.98	34.19	1.54		26.66	138.5	0.489
117	8.94	33.87	3.16		300	7.83	34.22	1.67		26.70	134.4	0.560
144	8.88	33.96	3.24		400	7.08	34.26	1.56		26.85	121.0	0.693
190	8.34	34.07	2.10		500	6.30	34.28			26.97	109.8	0.814
242	8.01	34.18	1.55									
337	7.67	34.25	1.91									
446	6.64	34.27	0.94									
562	5.94	34.30	1.52u									

BLACK DOUGLAS; September 6, 1955; 1821 GCT; 34°09'N, 121°09'W; sounding, 1100 fm; wind, 302°, force 5; weather, cloudy; sea, rough; wire angle, 13°. 70

0	15.4	33.62	6.42u		0	15.4	33.62	(5.60)		24.84	311.8	0.000
8	15.39	33.62	5.62		10	15.39	33.62	5.65		24.85	311.2	0.031
23	15.25	33.60	5.88		20	15.30	33.60	5.83		24.85	310.7	0.062
51	11.30	33.64	4.43		30	15.00	33.60	5.79		24.91	305.3	0.093
64	10.13	33.74	3.29		50	11.50	33.63	4.52		25.64	235.4	0.147
78	9.32	33.76	2.82		75	9.45	33.76	2.87		26.09	192.8	0.201
101	8.70	33.87	2.82		100	8.74	33.87	2.82		26.30	173.4	0.248
123	8.56	34.00	2.85		150	8.32	34.03	2.25		26.48	155.7	0.331
151	8.32	34.03	2.23		200	8.05	34.15	2.03		26.62	143.0	0.407
199	8.06	34.15	2.01		250	7.73	34.29	1.00		26.78	127.8	0.476
261	7.66	34.29	0.99		300	7.35	34.28	1.28		26.82	123.1	0.542
355	6.89	34.27	1.63		400	6.60	34.29	1.43		26.94	112.7	0.665
469	6.19	34.33	0.91		500	6.00	34.34	0.83		27.06	100.8	0.778
624	5.09	34.38	0.64		600	5.25	34.37	0.64		27.17	90.3	0.881
831	4.37	34.48	0.82		700	4.79	34.43	0.73		27.27	81.3	0.974
1070	3.66	34.54	0.85		800	4.46	34.47	0.82		27.34	74.1	1.060
1361	2.99	34.60	1.36		1000	3.87	34.52	0.84		27.44	64.7	1.216
					1200	3.34	34.57	1.05		27.53	56.4	1.355

a) Mean value of 11.41 and 11.59°C.

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BLACK DOUGLAS; September 6, 1955; 0755 GCT; 33°49'N, 121°51'W; sounding, 2000 fm; wind, 315°, force 4; weather, overcast; sea, very rough; wire angle, 07°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	14.49	33.43	5.87		0	14.49	33.43	5.87		24.90	306.0	0.000
9	14.46	33.43	5.47		10	14.43	33.43	5.47		24.90	306.0	0.031
24	13.96	33.61	5.67		20	14.19	33.60	5.58		25.10	287.7	0.060
51	12.06	33.31	5.43		30	13.59	33.57	5.64		25.19	278.8	0.089
61	10.60	33.17	5.67		50	12.18	33.33	5.43		25.28	270.1	0.144
70	10.30	33.24	5.70		75	10.19	33.30	5.67		25.62	238.1	0.208
84	9.93	33.38	5.13		100	9.33	33.49	4.35		25.90	210.3	0.264
103	9.24	33.51	4.28		150	8.46	33.88	3.05		26.35	168.3	0.360
127	8.77	33.76	3.34		200	7.70	34.02	2.38		26.58	146.9	0.441
156	8.39	33.91	2.96		250	7.20	34.10	1.78		26.71	134.2	0.513
207	7.59	34.04	2.27		300	6.70	34.13	1.42		26.80	125.9	0.580
280	6.94	34.13	1.55		400	5.42	34.11	0.90		26.95	111.9	0.704
381	5.57	34.10	0.98		500	5.28	34.23	0.70		27.05	101.7	0.816
516	5.26	34.28	0.62		600	5.08	34.35	0.78		27.17	90.2	0.918
699	4.57	34.37	0.65		700	4.56	34.37	0.67		27.25	83.0	1.012
					800	4.28	34.42	0.75		27.32	76.1	1.100
0	14.47u	33.44u	5.70u		1000	3.73	34.48	1.28		27.43	66.5	1.259
9	14.41u	33.44u	5.76u		1200	3.23	34.53	1.36		27.51	58.0	1.400
468	5.30	34.20	0.76		1500	2.63	34.59	1.44		27.62	48.0	1.586
636	4.97	34.37	0.89		2000	2.06	34.62	2.00		27.69	41.2	1.854
792	4.31	34.42	0.72		2500	1.83	34.63	2.15		27.72	38.8	2.101
977	3.79	34.52u	1.28									
1164	3.32	34.52	1.34									
1419	2.74	34.58	1.43									
1676	2.42	34.58u	1.37									
1957	2.09	34.63u	1.94									
2529	1.82	34.63u	2.24									

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BLACK DOUGLAS; September 5, 1955; 1920 GCT; 33°09'N, 123°13'W; sounding, 2400 fm; wind, 310°, force 3; weather, overcast; sea, rough; wire angle, 18°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	16.36	33.39	5.70		0	16.36	33.39	5.70		24.45	349.0	0.000
8	16.32	33.36	5.61		10	16.33	33.36	5.60		24.44	350.1	0.035
22	16.23	33.43	5.41		20	16.27	33.43	5.43		24.50	344.1	0.070
49	16.08	33.40	5.35		30	16.19	33.43	5.39		24.52	342.8	0.104
63	14.42	33.31	5.44		50	16.07	33.40	5.35		24.53	341.7	0.173
77	13.38	33.30	5.65		75	13.50	33.30	5.64		25.00	296.4	0.253
99	11.99	33.32	5.44		100	11.95	33.32	5.43		25.32	266.0	0.324
122	9.60r	33.31	5.04		150	9.92	33.58	4.50		25.88	213.2	0.445
149	9.94	33.57	4.51		200	8.66	33.81	3.04		26.26	176.9	0.545
199	8.68	33.80	3.05		250	7.81	33.98	2.69		26.52	151.8	0.629
260	7.69	34.01	2.61		300	7.32	34.08	2.17		26.67	138.1	0.703
346	6.94	34.14	1.28		400	6.39	34.16	1.21		26.87	119.5	0.837
453	5.93	34.19	1.15		500	5.70	34.22	0.71		27.00	106.8	0.957
601	5.28	34.31	0.52		600	5.29	34.31	0.53		27.12	95.3	1.065
806	4.52	34.42	0.85		700	4.89	34.40	0.70		27.23	84.7	1.162
1049	3.86	34.43	0.72		800	4.54	34.42	0.84		27.29	79.2	1.252
1344	3.10	34.53	1.03		1000	3.98	34.42	0.72		27.35	73.3	1.422
					1200	3.48	34.47	0.87		27.44	65.0	1.579

BLACK DOUGLAS; September 5, 1955; 0337, 0528 GCT; 32°29'N, 124°35'W; sounding, 2460 fm; wind, 290°, force 3; weather, overcast; sea, rough; wire angle, 05°, 00°. 73

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	16.51	33.46	5.35		0	16.51	33.46	5.35		24.47	347.2	0.000
9	16.44	33.46	5.26		10	16.45	33.46	5.13		24.49	345.6	0.035
24	15.85	33.44	5.02		20	15.99	33.45	5.08		24.58	336.1	0.069
51	15.61	33.40	4.85		30	15.80	33.43	4.99		24.61	333.9	0.102
61	14.99	33.41	5.54		50	15.63	33.40	4.85		24.62	332.4	0.169
70	14.36	33.37	5.50		75	14.00	33.37	5.55		24.95	301.4	0.249
84	13.38	33.38	5.60		100	12.60	33.37	5.32		25.23	274.5	0.322
102	12.54	33.37	5.30		150	10.12	33.48	4.61		25.77	223.8	0.448
125	11.60	33.47	5.17		200	8.63	33.88	3.31		26.32	171.0	0.548
154	9.88	33.49	4.49		250	7.68	34.04	2.58		26.59	145.3	0.629
204	8.55	33.90	3.25		300	7.19	34.16	1.60		26.76	129.3	0.700
279	7.33	34.11	2.13		400	6.79	34.23	0.93		26.87	119.4	0.831
381	6.94	34.23	0.94		500	5.99	34.32	0.57		27.05	102.5	0.948
516	5.92	34.33	0.49		600	5.35	34.37	0.60		27.15	92.1	1.053
701	4.83	34.40	0.34		700	4.83	34.40	0.34		27.24	84.0	1.148
					800	4.41	34.45	0.72		27.33	75.5	1.236
0	16.49u	33.43u	5.07u		1000	3.82	34.50	0.68		27.43	66.2	1.394
9	15.42r	33.38u	5.23u		1200	3.33	34.54	1.07		27.51	58.0	1.536
469	6.06	34.23	0.88		1500	2.77	34.61	1.19		27.62	47.8	1.723
638	5.14	34.38	0.64		2000	2.07	34.65	1.90		27.71	39.2	1.989
759p	4.58	34.43	0.58									
797	4.42	34.45	0.72									
984	3.86	34.49	0.62									
1172	3.40	34.53	1.01									
1687	2.46	34.64	1.28									
1969	2.10	34.65	1.69									
2346	1.82	34.70	2.21									

BLACK DOUGLAS; September 4, 1955; 1228 GCT; 31°37'N, 126°19'W; sounding, 2600 fm; wind, 332°, force 2; weather, drizzle; sea, rough; wire angle, 15°. 74

0	16.64	33.49	5.26		0	16.64	33.49	5.26		24.46	348.2	0.000
8	16.62	33.48	5.23		10	16.62	33.48	5.22		24.45	348.8	0.035
23	16.62	33.47	5.17		20	16.62	33.47	5.18		24.45	349.1	0.070
50	16.15	33.44	5.17		30	16.57	33.46	5.16		24.45	348.8	0.105
63	14.78	33.60u	5.36		50	16.15	33.44	5.17		24.54	340.8	0.174
78	13.76	33.37	5.46		75	13.89	33.37	5.44		24.97	299.2	0.254
99	13.05	33.57	5.44		100	13.00	33.57	5.43		25.31	267.5	0.326
122	11.12	33.41	4.92		150	9.77	33.57	4.88		25.90	210.9	0.447
149	9.78	33.57	4.88		200	8.50	33.91	3.07		26.37	166.7	0.543
195	8.59	33.88	3.25		250	7.92	34.10	2.52		26.61	143.9	0.623
256	7.84	34.11	2.48		300	7.32	34.12	1.98		26.71	134.5	0.695
347	6.81	34.14	1.58		400	6.28	34.20	1.12		26.91	115.2	0.825
459	5.84	34.26	0.78		500	5.60	34.28	0.66		27.06	101.2	0.940
610	5.02	34.33	0.59		600	5.06	34.33	0.59		27.16	91.6	1.043
814	4.34	34.47	0.63		700	4.69	34.39	0.59		27.25	83.0	1.137
1052	3.66	34.55	0.92		800	4.38	34.46	0.61		27.34	74.1	1.224
1345	3.02	34.61	1.81		1000	3.81	34.54	0.81		27.47	62.5	1.378
					1200	3.32	34.59	1.28		27.55	54.9	1.513

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BLACK DOUGLAS; September 3, 1955; 2016, 2209 GCT; 31°09'N, 127°48'W; sounding, 2400 fm; wind, 338°, force 3; weather, overcast; sea, very rough; wire angle, 05°, 14°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	17.93	33.96	4.79		0	17.93	33.96	4.79		24.52	342.9	0.000
9	17.87	33.95	5.01		10	17.87	33.95	5.00		24.52	342.3	0.034
23	17.86	33.94	4.90		20	17.85	33.94	4.93		24.52	342.3	0.069
51	17.11	33.90	5.32		30	17.85	33.93	4.91		24.52	342.3	0.103
60	16.57	33.95	5.57		50	17.50	33.91	5.07		24.58	336.7	0.171
68	16.52	34.07	5.01		75	16.40	34.07	5.10		24.96	300.6	0.251
83	16.16	34.04	5.35		100	15.30	33.96	5.33		25.13	284.2	0.325
101	15.26	33.96	5.33		150	13.20	33.69	5.07		25.36	262.3	0.464
124	14.92	33.96	5.18		200	9.98	33.62	4.30		25.90	211.0	0.584
153	12.98	33.67	5.04		250	8.35	33.91	3.60		26.39	164.9	0.680
203	9.80	33.62	4.27		300	7.39	33.99	2.94		26.59	145.7	0.760
277	7.78	33.97	3.21		400	6.17	34.06	1.85		26.81	124.2	0.900
379	6.34	34.03	2.03		500	5.42	34.17	1.16		26.99	107.9	1.022
514	5.29	34.18	0.98		600	4.96	34.23	0.60		27.10	97.6	1.131
697	4.48	34.32	0.72		700	4.47	34.32	0.70		27.23	85.3	1.229
					800	4.28	34.36	0.72		27.28	80.5	1.320
0	17.95u	33.93u	5.01u		1000	3.78	34.47	0.90		27.41	67.6	1.485
9	17.86u	33.94u	4.82u		1200	3.25	34.54	1.02		27.52	57.9	1.628
457	5.86	34.13	1.57		1500	2.72	34.59	1.18		27.60	49.5	1.816
622	4.87	34.25	0.59		2000	2.10	34.62	1.56		27.68	42.1	2.091
777	4.33	34.35	0.69									
960	3.79	34.47	0.88									
1144	3.39	34.45u	2.18r									
1398	2.86	34.58	1.45u									
1655	2.54	34.61u	1.25									
1936	2.17	34.60u	1.58									
2312	1.88	34.65	1.95									

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STRANGER; September 1, 1955; 1005, 1127 GCT; 31°08.5'N, 130°59'W; sounding, 2410 fm; wind, 070°, force 8; weather, overcast; sea, high; wire angle, 21°, 25°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
1	18.59	33.92	4.86		0	(18.59)	(33.92)	(4.86)		(24.32)	(361.5)	(0.000)
9	18.61	33.99	5.49		10	18.65	34.00	5.48		24.37	356.7	0.036
24	18.68	34.05	5.56		20	18.68	34.04	5.53		24.38	355.3	0.072
51	18.87	34.03r	5.60		30	18.75	34.14	5.60		24.44	349.8	0.107
60	18.15	34.36	5.63		50	18.90	34.43	5.60		24.63	331.8	0.175
69	17.65	34.29	5.87		75	17.50	34.31	5.90		24.89	307.0	0.256
81	17.28	34.33	5.92		100	16.59	34.39	5.80		25.18	280.0	0.330
98	16.61	34.40	5.90		150	14.90	34.19	6.01		25.39	259.8	0.467
119	16.16	34.28	5.62		200	10.18	33.65	5.05		25.89	211.7	0.587
143	15.34	34.28	5.94		250	8.80	33.69	4.27		26.15	187.2	0.689
188	10.66	34.24r	5.35		300	7.70	(33.79)	3.78		(26.39)	(164.7)	(0.780)
254	8.71	33.70	4.21		400	6.26	(33.98)	2.45		(26.74)	(131.5)	(0.933)
347	6.95	-	3.36		500	5.49	(34.13)	1.33		(26.96)	(110.8)	(1.060)
472	5.66	-	1.46		600	4.92	34.27	0.86		27.14	93.9	(1.169)
649	4.62	-	0.64		700	4.45	34.39	0.55		27.27	80.8	(1.263)
					800	4.18	34.45	0.58		27.35	73.5	(1.347)
0	18.77u	-	5.58u		1000	3.72	34.54	0.75		27.47	61.8	(1.499)
9	18.75u	-	5.50u		1200	3.28	34.60	1.05		27.57	53.0	(1.632)
440	6.07u	-	2.16		1500	2.78	34.64	1.46		27.64	45.9	(1.808)
596	4.95	34.26	0.88		2000	2.08	34.70	2.04		27.75	35.4	(2.058)
744	4.34	34.41	0.55									
921	3.88	34.49	0.62									
1099	3.50	34.58	0.84									
1347	2.97	34.63	1.38									
1602	2.66	34.65	1.50									
1887	2.21	34.69	1.87									
2276	1.88	34.71	2.43									

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

STRANGER; August 30, 1955; 1413 GCT; 31°08'N, 134°10'W; sounding, 2530 fm; wind, 080°, force 4; weather, overcast; sea, moderate; wire angle, 15°. 77

0	19.44	33.78	5.67	0.4	0	19.44	33.78	5.67	0.4	24.00	392.2	0.000
10	19.45	33.80	5.60	0.4	10	19.45	33.80	5.60	0.4	24.01	391.0	0.039
24	18.87	33.85	5.68	0.4	20	18.88	33.77	5.80	0.3	24.14	379.2	0.078
48	16.36	33.62	6.19	0.4	30	18.88	33.99	5.41	0.5	24.30	363.3	0.115
61	16.10	33.70	6.12	0.4	50	16.31	33.62	6.18	0.4	24.64	331.0	0.185
76	15.52	33.70	6.13	0.4	75	15.56	33.70	6.12	0.4	24.87	309.4	0.265
94	14.94	33.73	6.08	0.5	100	14.83	33.75	6.04	0.5	25.07	290.3	0.341
116	14.58	33.80	5.98	0.4	150	13.40	33.77	5.68	0.5	25.38	260.9	0.480
146	14.53r	33.96u	5.95u	0.5	200	10.49	33.59	5.37	1.2	25.79	221.8	0.603
193	10.73	33.58	5.42	1.1	250	9.15	33.86	4.77	1.6	26.23	180.1	0.706
253	9.04	33.87	4.71	1.6	300	8.10	33.93	4.22	1.9	26.44	160.0	0.794
341	7.36	33.96	3.58	2.2	400	6.56	34.01	2.42	2.7	26.72	133.2	0.946
454	6.03	34.05	1.76	2.9	500	5.69	34.09	1.35	3.1	26.89	116.6	1.076
605	4.98	34.16	0.66	3.3	600	5.00	34.15	0.70	3.3	27.03	104.0	1.193
835	4.09	34.38	0.40	3.4	700	4.58	34.24	0.46	3.3	27.14	93.2	1.298
1082	3.44	34.48	0.81	3.4	800	4.21	34.35	0.40	3.4	27.27	80.8	1.393
1385	2.86	34.54	1.13	3.3	1000	3.65	34.46	0.70	3.4	27.41	67.6	1.556
					1200	3.20	34.50	0.96	3.4	27.49	59.8	1.700

STRANGER; August 29, 1955; 1354, 1532 GCT; 31°12'N, 137°19'W; sounding, 2600 fm; wind, 345°, force 2; weather, slight rain showers; sea, moderate; wire angle, 02°, 00°. 78

0	20.70	34.93	5.42	0.2	0	20.70	34.93	5.42	0.2	24.54	340.0	0.000
8	20.73	34.96	5.38	0.2	10	20.70	34.96	5.46	0.2	24.56	338.6	0.034
23	20.43	34.90	5.46	0.2	20	20.48	34.92	5.48	0.2	24.59	336.2	0.068
48	20.12	34.88	5.41	0.2	30	20.36	34.89	5.43	0.2	24.61	334.1	0.101
55	19.92	34.89	5.51	0.2	50	20.09	34.88	5.45	0.2	24.67	327.7	0.168
67	17.97	34.67	5.82	0.2	75	17.79	34.66	5.80	0.2	25.08	288.5	0.246
78	17.70	34.66	5.78	0.2	100	17.18	34.61	5.70	0.2	25.19	278.6	0.317
98	17.19	34.61	5.70	0.2	150	16.39	34.50	5.54	0.3	25.29	269.2	0.456
122	17.03	34.63	5.66	0.3	200	12.74	34.03	5.33	0.7	25.72	228.3	0.583
152	16.32	34.48	5.53	0.3	250	11.09	34.05	5.02	1.1	26.05	197.2	0.692
201	12.73	34.04	5.33	0.7	300	9.41	33.99	4.93	1.5	26.28	174.6	0.788
272	10.21	34.01	5.04	1.3	400	7.25	33.98	3.73	2.0	26.60	144.8	0.954
374	7.73	33.98	4.13	1.9	500	5.82	33.99	2.46	2.6	26.80	126.0	1.095
501	5.82	33.99	2.46	2.7	600	5.00	34.11	1.30	3.0	26.99	107.8	1.218
685	4.67	34.21	0.68	3.3	700	4.63	34.22	0.57	3.3	27.13	94.5	1.326
					800	4.26	34.31	0.43	3.3	27.24	84.0	1.422
0	20.75u	34.96u	5.42	0.3u	1000	3.71	34.45	0.58	3.3	27.41	68.3	1.590
10	20.56u	34.95u	5.49u	0.2u	1200	3.21	34.50	0.91	3.3	27.49	59.6	1.735
495	5.83u	33.96u	2.67u	2.6u	1500	2.70	34.58	1.40	3.2	27.61	49.2	1.923
664	4.73	34.20	0.70	3.2	2000	2.06	34.62	1.82	3.1	27.68	41.6	2.197
832	4.15	34.33	0.42	3.3								
1025	3.64	34.46	0.60	3.3								
1220	3.16	34.51	0.94	3.3								
1488	2.72	34.58	1.34	3.2								
1758	2.40	34.60	1.62	3.2								
2055	1.99	34.63	1.89	3.1								
2456	1.75	34.65	2.33	3.0								

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STRANGER; August 28, 1955; 1643 GCT; 31°09'N, 140°29'W; sounding, 2550 fm; wind, 100°, force 2; weather, partly cloudy; sea, moderate; wire angle, 00°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	20.91	34.80	5.38	0.2	0	20.91	34.80	5.38	0.2	24.39	355.4	0.000
10	20.92	34.79	5.38	0.2	10	20.92	34.79	5.38	0.2	24.38	356.2	0.036
24	20.67	34.85	5.46	0.2	20	20.79	34.83	5.41	0.2	24.44	349.5	0.071
49	19.86	34.82	5.71	0.2	30	20.57	34.86	5.49	0.2	24.52	342.1	0.106
63	18.05	34.54	5.89	0.2	50	19.80	34.81	5.72	0.2	24.69	325.9	0.173
79	17.50	34.52	5.94	0.2	75	17.62	34.52	5.93	0.2	25.02	294.8	0.251
98	16.74	34.49	5.78	0.3	100	16.71	34.49	5.77	0.3	25.22	276.0	0.323
123	16.09	34.42	5.67	0.3	150	13.80	34.09	5.59	0.5	25.55	244.2	0.455
152	13.70	34.08	5.59	0.5	200	11.42	33.97	5.24	1.0	25.91	209.7	0.571
201	11.41	33.97	5.24	1.0	250	10.60	34.04	5.20	1.1	26.12	190.2	0.673
264	10.34	34.05	5.18	1.2	300	9.70	34.08	5.00	1.3	26.31	172.3	0.767
358	8.50	34.05	4.53	1.7	400	7.60	34.02	4.13	1.8	26.58	146.3	0.933
474	6.01	33.96	3.20	2.4	500	5.73	33.97	2.90	2.6	26.80	126.0	1.075
631	4.84	34.13	0.99	3.1	600	4.98	34.10	1.43	3.0	26.99	107.7	1.198
852	4.16	34.29	0.38	3.3	700	4.63	34.18	0.58	3.2	27.09	98.1	1.308
1029p	3.55	34.43	0.52	3.4	800	4.33	34.26	0.38	3.3	27.19	89.0	1.408
1315p	3.02	34.51	0.96	3.3	1000	3.63	34.40	0.49	3.4	27.37	71.8	1.585
					1200	3.22	34.47	0.71	3.3	27.46	62.4	1.736

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STRANGER; August 27, 1955; 1925, 1947, 2115 GCT; 31°08.5'N, 143°39'W; sounding, 2750 fm; wind, 090°, force 2; weather, cloudy; sea, moderate; wire angle, 02°, 07°, 05°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	21.79	34.96	5.43	0.2	0	21.79	34.96	5.43	0.2	24.27	366.2	0.000
10	21.68	34.97	5.43	0.2	10	21.68	34.97	5.43	0.2	24.30	363.2	0.036
25	21.34	35.10	5.75	0.2	20	21.43	35.10	5.69	0.2	24.47	347.3	0.072
50	19.14	34.81	5.71	0.2	30	21.28	35.09	5.78	0.2	24.51	343.1	0.107
60	18.73	34.81	6.02	0.2	50	19.14	34.81	5.71	0.2	24.86	310.0	0.172
70	18.36	34.79	5.93	0.2	75	18.13	34.78	5.83	0.2	25.09	287.8	0.248
80	17.96	34.78	5.78	0.2	100	17.60	34.77	5.94	0.3	25.22	276.2	0.319
100	17.60	34.77	5.94	0.3	150	16.65	34.61	5.47	0.3	25.32	266.0	0.457
124	17.30	34.74	5.73	0.3	200	13.02	34.16	5.21	0.7	25.75	224.8	0.582
153	16.47	34.58	5.44	0.3	250	11.70	34.13	5.28	1.0	26.00	202.1	0.691
					300	10.63	34.11	5.18	1.2	26.16	185.8	0.792
200	13.02	34.16	5.21	0.7	400	8.62	34.01	4.52	1.6	26.42	162.1	0.972
268	11.24	34.13	5.30	1.1	500	6.59	33.95	3.60	2.3	26.68	137.4	1.129
369	9.27	34.04	4.74	1.5	600	5.26	34.03	1.93	2.9	26.89	117.2	1.263
495	6.62	33.96	3.69	2.3	700	4.80	34.07	1.21	3.2	26.99	108.0	1.383
628p	5.07	34.04	1.57	3.0	800	4.26	34.23	0.65	3.3	27.16	91.5	1.491
					1000	3.74	34.39	0.38	3.4	27.33	74.6	1.673
0	22.15u	35.00u	5.30u	0.2	1200	3.27	34.48	0.66	3.4	27.47	62.5	1.827
10	21.68	34.94u	5.36u	0.2	1500	2.67	34.56	1.50		27.59	51.0	2.024
491	6.78	33.95	3.82	2.1	2000	2.07	34.60	1.88		27.66	43.9	2.309
662	4.93	34.05	1.31	3.1								
825	4.17	34.28	0.49	3.3								
1017	3.70	34.39	0.39	3.4								
1211	3.24	34.49	0.71	3.4								
1479	2.70	34.55	1.48	3.0r								
1747	2.44	34.58	1.77	3.0r								
2043	2.02	34.60	1.91	2.9r								
2440	1.78	34.65	2.22	3.1u								

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

STRANGER; August 26, 1955; 2131 GCT; 31°07'N, 146°49.5'W; sounding, 2950 fm; wind, 056°, force 4; weather, cloudy; sea, rough; wire angle, 04°. 81

0	22.45	35.00	5.31	0.2	0	22.45	35.00	5.31	0.2	24.11	381.0	0.000
10	22.43	35.01	5.29	0.2	10	22.43	35.01	5.29	0.2	24.13	380.0	0.038
25	22.40	35.05	5.29	0.2	20	22.42	35.04	5.28	0.2	24.15	378.0	0.076
50	20.12	34.97	5.61	0.2	30	21.90	34.98	5.58	0.4	24.25	368.1	0.113
65	18.51	34.79	5.73	0.2	50	20.12	34.97	5.61	0.2	24.72	323.0	0.183
80	18.14	34.83	5.64	0.2	75	18.70	34.95	5.55	0.2	25.08	288.8	0.260
99	17.35	34.69	5.64	0.2	100	17.30	34.69	5.64	0.2	25.22	275.8	0.331
124	16.00	34.48	5.78	0.3	150	13.26	34.06	5.78	0.5	25.64	236.0	0.461
152	13.12	34.05	5.76	0.6	200	11.52	34.04	5.47	0.9	25.95	206.0	0.574
199	11.55	34.04	5.48	0.9	250	10.81	34.08	5.35	1.0	26.11	190.9	0.675
262	10.66	34.09	5.33	1.1	300	10.10	34.10	5.15	1.2	26.25	177.8	0.770
351	9.24	34.09	4.78	1.4a)	400	8.31	34.05	4.47	1.6	26.50	153.9	0.943
466	7.00	33.99	4.01	2.0	500	6.42	33.99	3.71	2.2	26.72	133.0	1.093
620	4.84	34.02	1.98	2.9	600	5.01	34.01	2.29	2.8	26.90	115.9	1.224
837	3.88	34.27	0.41	3.3	700	4.38	34.10	1.13	3.2	27.06	101.1	1.339
1086	3.42	34.43	0.55	3.4	800	3.98	34.25	0.44	3.2	27.22	86.1	1.439
1390	1.75r	34.54	1.00	3.3	1000	3.56	34.41	0.50	3.4	27.39	70.0	1.610

STRANGER; August 25, 1955; 1557, 1612, 1820 GCT; 31°12'N, 150°07'W; sounding, 2900 fm; wind, 030°, force 4; weather, cloudy; sea, rough; wire angle, 00°, 00°, 06°. 82

0	23.13	35.40	5.18	0.2	0	23.13	35.40	5.18	0.2	24.22	370.9	0.000
10	23.13	35.45	5.17	0.2	10	23.13	35.45	5.17	0.2	24.26	367.2	0.037
25	23.12	35.43	5.12	0.2	20	23.13	35.43	5.13	0.2	24.24	368.7	0.074
55	19.62	35.08	5.62	0.2	30	22.70	35.39	5.12	0.2	24.33	360.1	0.110
65	19.29	35.03	5.63	0.2	50	19.91	35.11	5.58	0.2	24.89	307.2	0.177
					75	19.03	35.03	5.56	0.2	25.06	291.3	0.253
75	19.03	35.03	5.56	0.2	100	18.59	35.04	5.45	0.2	25.18	280.0	0.325
89	18.82	35.07	5.46	0.2	150	17.47	34.88	5.30	0.2	25.33	265.0	0.463
110	18.35	34.99	5.46	0.2	200	15.00	34.54	5.09	0.6	25.64	236.4	0.591
134	17.80	34.88	5.34	0.2	250	12.64	34.28	5.08	0.8	25.92	208.8	0.706
163	17.11	34.89	5.28	0.3	300	11.52	34.23	5.15	1.0	26.10	191.5	0.809
217	13.66	34.34	5.05	0.7	400	9.32	34.11	4.65	1.4	26.38	164.8	0.995
295	11.64	34.24	5.14	1.0	500	7.45	34.00	4.10	1.8	26.58	145.9	1.158
403	9.24	34.10	4.62	1.5	600	5.90	33.98	3.28	2.3	26.79	126.8	1.302
545	6.48u	33.95u	3.65u	2.1u	700	4.72	34.01	2.11	2.7	26.95	111.5	1.429
719	4.66u	34.00u	2.46u	2.6u	800	4.20	34.16	1.07	3.0	27.12	94.9	1.539
					1000	3.63	34.34	0.33	3.2	27.32	76.0	1.726
0	23.15u	35.43u	5.12u	0.2	1200	3.21	34.43	0.47	3.2	27.44	65.3	1.885
503	7.53u	34.02u	4.12u	1.8u	1500	2.68	34.53	1.16	3.1	27.57	53.0	2.089
672	4.89u	34.02u	1.89u	2.8u	2000	1.96	34.61	1.78	3.0	27.68	41.8	2.372
833	4.08	34.20	0.67	3.1	2500	1.70	34.67	2.33	2.7	27.75	35.5	2.610
1072	3.47	34.38	0.31	3.3	3000	1.54	(34.69)	2.79	2.6	(27.78)	(32.8)	(2.828)
1309	3.00	34.49	0.79	3.2								
1644	2.47	34.57	1.33	3.1								
2031	1.93	34.62	1.83	2.9								
2418	1.74	34.66	2.27	2.8								
2910	1.56	34.69	2.72	2.7								
3400	1.46	34.67u	3.21	2.6								

a) Mean value of 1.3 and 1.5 μg at/L.

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

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STRANGER; September 6, 1955; 0216, 0300 GCT; 33°34'N, 117°54'W; sounding, 340 fm; wind, 320°, force 4; weather, clear; sea, moderate; wire angle, 18°, 27°.

0	21.16	33.60	5.68	0	21.16	33.60	5.68		23.41	448.0	0.000
10	20.91	33.62	5.79	10	20.91	33.62	5.79		23.49	440.5	0.044
29	14.25	33.51	6.43	20	17.70	33.57	6.35		24.27	366.0	0.085
				30	14.00	33.51	6.35		25.06	291.4	0.118
35	12.98	33.48	5.76	50	11.50	33.47	4.92		25.51	247.8	0.172
44	12.15	33.46	5.29	75	9.80	33.55	3.95		25.88	213.3	0.230
52	-	33.44	4.75	100	9.40	33.71	3.40		26.07	195.4	0.281
61	10.46	33.49	4.42	150	9.12	33.91	2.53		26.27	176.2	0.375
69	10.04	33.51	4.14	200	9.03	34.00	2.25		26.35	168.1	0.463
77	9.77	33.57	3.91	250	8.98	34.10	1.85		26.44	159.7	0.547
86	9.57	33.63	3.68	300	8.46	34.11	1.93		26.52	152.0	0.628
107	9.35	33.74	3.21	400	7.48	34.22	1.02		26.76	129.5	0.774
132	9.26	33.88	2.48	500	6.58	34.31	0.43		26.95	111.3	0.902
175	8.97	33.95	2.59								
229	9.12	34.09	1.89								
324	8.16	34.11	1.96								
438	7.18	34.27	0.68								
562	5.93	34.33	0.28								

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STRANGER; September 5, 1955; 2156 GCT; 33°10'N, 118°24'W; sounding, 620 fm; wind, 270°, force 4; weather, clear; sea, moderate; wire angle, 11°.

0	20.64	33.64	5.66	0.5	0	20.64	33.64	5.66	0.5	23.58	432.1	0.000
11	20.41	33.64	5.80	0.5	10	20.51	33.64	5.75	0.5	23.61	429.0	0.043
28	14.14	33.48	6.10	0.9	20	17.30	33.57	6.12	0.7	24.37	356.8	0.082
38	12.56	33.49	5.47	1.1	30	14.00	33.48	6.09	0.9	25.03	293.8	0.115
48	11.39	33.43	5.36	1.2	50	11.30	33.43	5.31	1.2	25.52	247.2	0.169
58	-	33.46	4.67	1.7	75	9.86	33.53	3.75	1.7	25.85	216.0	0.227
66	10.18	33.52	3.90	1.8	100	9.42	33.67	3.36	2.0	26.04	198.3	0.280
75	9.86	33.53	3.75	1.7	150	9.10	33.98	2.53	2.3	26.33	170.1	0.373
94	9.48	33.65	3.46	1.9	200	8.91	34.16	1.78	2.4	26.50	154.0	0.456
117	9.21	33.81	3.03	2.1	250	8.58	34.21	1.51	2.5	26.59	145.9	0.533
145	9.10	33.95	2.53	2.3	300	8.18	34.24	1.28	2.7	26.68	137.2	0.607
192	8.95	34.14	1.86	2.4	400	7.40	34.29	0.89	2.9	26.83	123.3	0.743
258	8.48	34.22	1.47	2.6	500	6.65	34.32	0.40	3.0	26.95	110.7	0.867
357	7.69	34.27	1.03	2.9	600	5.99	34.34	0.32	3.0	27.06	101.5	0.982
483	6.76	34.32	0.45	3.0	700	5.47	34.36	0.30	3.0	27.13	94.0	1.088
635	5.79	34.35	0.29	3.0	800	(5.00)	(34.40)	(0.28)	(3.2)	(27.22)	(85.8)	(1.187)
788	5.06a)	34.40	0.28	3.2								

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STRANGER; September 5, 1955; 1250 GCT; 32°38'N, 119°28'W; sounding, 500 fm; wind, 310°, force 5; weather, overcast; sea, very rough; wire angle, 04°.

0	18.02	33.64	5.56	0.5	0	18.02	33.64	5.56	0.5	24.24	368.5	0.000
10	18.00	33.64	5.72	0.5	10	18.00	33.64	5.72	0.5	24.25	368.0	0.037
29	14.42	33.53	6.20	0.7	20	17.70	33.63	5.86	0.5	24.32	361.5	0.073
40	12.96	33.51	5.73	1.0	30	14.30	33.53	6.19	0.7	25.01	295.7	0.106
50	12.05	33.48	5.33	1.1	50	12.05	33.48	5.33	1.1	25.42	256.8	0.162
60	-	33.46	5.22	1.2	75	10.40	33.57	4.47	1.6	25.78	222.0	0.222
70	10.74	33.53	4.77	1.5	100	9.43	33.70	3.50	1.9	26.05	197.1	0.275
79	10.11	33.61	4.10	1.7	150	8.60	33.90	2.95	2.1	26.34	169.2	0.367
98	9.44	33.69	3.53	1.9	200	8.10	34.03	2.45	2.2	26.52	152.2	0.449
123	9.15	33.77	3.17	2.1	250	7.70	34.16	1.68	2.5	26.68	136.8	0.523
153	8.54	33.91	2.91	2.1	300	7.40	34.23	1.10	2.8	26.78	128.0	0.592
203	8.02	34.05	2.34	2.3	400	6.82	34.32	0.55	2.9	26.92	114.2	0.719
271	7.54	34.20	1.37	2.7	500	6.21	34.34	0.35	3.0	27.03	104.2	0.835
373	7.02	34.30	0.66	2.9	600	5.82	34.36	0.35	3.1	27.09	97.9	0.943
500	6.21	34.34	0.35	3.0	700	5.41	34.39	0.36	3.1	27.16	91.7	1.046
654	5.61	34.37	0.34	3.1	800	4.90	34.43	0.38	3.2	27.26	82.3	1.141
809	4.85	34.43	0.39	3.2								

a) Mean value of 5.03 and 5.09°C.

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

STRANGER; September 5, 1955; 0155, 0307 GCT; 32°14'N, 120°38'W; sounding, 2000 fm; wind, 300°, force 5; weather, overcast; sea, very rough; wire angle, 22°, 16°. 86

0	16.54	33.44	5.87	0.5	0	16.54	33.44	5.87	0.5	24.45	349.5	0.000
9	16.51	33.42	5.78	0.5	10	16.50	33.42	5.77	0.5	24.44	349.9	0.035
24	15.91	33.40	5.97	0.5	20	16.22	33.41	5.83	0.5	24.49	344.6	0.070
51	14.02	33.38	6.04	0.8	30	15.45	33.39	6.03	0.6	24.66	329.5	0.104
60	-	33.32	6.00	0.9	50	14.08	33.38	6.05	0.7	24.94	302.0	0.167
68	12.07	33.34	5.79	1.0	75	11.50	33.35	5.60	1.1	25.43	256.1	0.237
81	11.11	33.37	5.42	1.2	100	10.01	33.43	4.45	1.5	25.74	226.1	0.298
98	10.03	33.42	4.50	1.5	150	8.80	33.68	3.58	2.0	26.14	188.2	0.403
120	9.65	33.57	4.24	1.7	200	8.07	33.94	2.78	2.2	26.46	158.2	0.491
145	8.94	33.66	3.71	1.9	250	7.50	34.04	2.08	2.5	26.62	143.1	0.568
193	8.12	33.92	2.89	2.2	300	7.02	34.09	1.50	2.6	26.72	132.7	0.640
362	6.51	34.16	0.94	2.8	400	6.18	34.18	0.74	2.9	26.91	115.5	0.769
495	5.50	34.23	0.47	3.1	500	5.48	34.24	0.40	3.1	27.04	103.2	0.883
680	4.89	34.38u	0.36	3.2u	600	5.14	34.31	0.35	3.1	27.13	94.3	0.987
					700	4.82	34.43	0.38	3.2	27.26	81.8	1.082
0	-	33.43u	5.92u	0.6u	800	4.49	34.46	0.45	3.3	27.34	74.2	1.168
10	16.49u	33.42	5.92u	0.5	1000	3.94	34.51	0.60	3.2	27.42	66.6	1.325
463	5.53u	34.25u	0.46	3.1	1200	3.44	34.54	0.81	3.1	27.51	58.5	1.468
628	5.05	34.39u	0.34	3.2u	1500	2.83	34.58	1.30	3.1	27.59	51.0	1.660
784	4.54	34.37u	0.42	3.3	2000	2.08	34.63	2.04	2.9	27.69	40.8	1.937
973	4.01	34.50	0.58	3.2								
1161	3.54	34.54	0.76	3.1								
1423	2.94	34.57	1.20	3.1								
1684	2.59	34.61	1.44	3.0								
1973	2.12	34.63	1.93	2.9								
2368	1.85a)	34.67	2.31	2.8								

STRANGER; September 4, 1955; 1500, 1538 GCT; 31°25'N, 121°59'W; sounding, 2050 fm; wind, 300°, force 4; weather, overcast; sea, rough; wire angle, 04°, 02°. 87

0	16.08	33.51	5.92	0.7	0	16.08	33.51	5.92	0.7	24.61	334.2	0.000
9	16.07	33.49	5.95	0.7	10	16.07	33.49	5.95	0.7	24.60	335.0	0.034
24	15.07	33.53	6.10	0.8	20	15.30	33.53	6.08	0.8	24.80	316.0	0.066
50	14.10	33.42	6.01	0.8	30	14.82	33.50	6.10	0.8	24.88	308.1	0.097
65	12.83	33.32	6.27	0.8	50	14.10	33.42	6.01	0.8	24.97	299.8	0.158
79	-	33.49	5.77	1.1	75	12.82	33.49	5.90	1.0	25.28	270.0	0.230
99	11.08	33.48	5.40	1.3	100	11.00	33.48	5.36	1.3	25.62	238.2	0.294
123	9.45	33.47	4.79	1.5	150	8.98	33.77	3.40	2.0	26.18	184.5	0.401
152	8.96	33.78	3.31	2.0	200	8.00	33.95	2.78	2.3	26.48	156.4	0.488
201	8.00	33.96	2.78	2.3	250	7.35	34.05	2.35	2.6	26.65	140.4	0.564
258	7.24	34.06	2.27	2.5	300	6.78	34.09	1.52	2.7	26.76	129.5	0.634
355	6.22	34.13	0.47	2.8	400	6.11	34.24	0.45	3.2	26.96	110.1	0.759
471	6.03	34.31	0.45	3.2	500	5.94	34.35	0.43	3.3	27.07	99.6	0.870
625	5.24	34.43	0.28	3.3	600	5.38	34.42	0.28	3.3	27.19	88.8	0.972
846	4.35	34.49	0.48	3.3	700	4.91	34.45	0.33	3.3	27.27	80.2	1.064
					800	4.52	34.48	0.42	3.3	27.34	74.0	1.149
1110	3.55	34.52	0.82	3.2	1000	3.85	34.52	0.70	3.2	27.44	65.7	1.306
1412	2.95	34.56	1.14	3.1	1200	3.35	34.53	0.92	3.2	27.50	59.4	1.449

a) Mean value of 1.82 and 1.88°C.

CCOFI

NORPAC

88 STRANGER; September 3-4, 1955; 2122, 2151, 2242, 0026 GCT; 30°24.5'N, 124°01'W; sounding, 2400 fm; wind, 345°, force 4; weather, cloudy; sea, very rough; wire angle, 09°, 12°, 10°, 05°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	17.81	33.62	5.67	0.5	0	17.81	33.62	5.67	0.5	24.28	365.0	0.000
10	17.70	33.59	5.71	0.5	10	17.70	33.59	5.71	0.5	24.29	364.2	0.036
26	17.29	33.63	5.80	0.5	20	17.42	33.62	5.78	0.5	24.38	355.5	0.073
55	17.23	33.62	5.67	0.5	30	17.28	33.62	5.78	0.5	24.42	352.2	0.108
64	17.09	33.60	5.72	0.5	50	17.27	33.62	5.68	0.5	24.42	351.9	0.179
74	15.85	33.45	6.07	0.5	75	15.70	33.44	6.08	0.5	24.64	331.1	0.265
88	14.21	33.39	6.16	0.5	100	13.43	33.38	6.04	0.6	25.07	290.3	0.343
107	13.10	33.37	5.94	0.7	150	11.20	33.44	5.16	1.2	25.55	244.0	0.478
130	12.02	33.42	5.56	1.1	200	9.30	33.76	3.52	1.8	26.12	190.2	0.589
158	10.81	33.46	4.96	1.3	250	8.66	34.08	1.98	2.4	26.48	156.2	0.677
210	9.03	33.84	3.22	2.0	300	8.29	34.15	1.66	2.7	26.58	146.1	0.756
286	8.42	34.14	1.75	2.6	400	6.94	34.17	1.20	3.0	26.80	125.8	0.897
391	7.05	34.17	1.28	2.9	500	6.11	34.21	0.63	3.1	26.94	112.4	1.023
532	5.95	34.23	0.48	3.1	600	5.65	34.29	0.37	3.2	27.06	101.1	1.137
					700	5.17	34.38	0.36	3.3	27.19	88.5	1.240
660p	5.47u	34.37u	0.33u	3.3u	800	4.69	34.42	0.40	3.3	27.26	81.7	1.333
					1000	4.05	34.48	0.63	3.2	27.39	70.1	1.501
0	-	33.64u	5.72u	0.5	1200	3.41	34.51	1.10	3.2	27.48	61.4	1.650
11	17.66u	33.64u	5.71u	0.5	1500	2.80	34.58	1.30	3.2	27.60	50.5	1.846
483	6.14u	34.19u	0.76u	3.0u	2000	2.13	34.63	2.09		27.68	42.1	2.127
655	5.26u	34.34u	0.35u	3.2u								
818	4.62	34.42	0.41	3.3								
1010	4.02	34.48	0.63	3.2								
1214	3.37	34.51	1.17	3.2								
1483	2.82	34.58	1.31	3.2								
1753	2.47	34.61	1.98	3.0								
2049	2.07	34.63	2.12	3.1u								
2451	1.82	34.63	2.44	3.1u								

89 STRANGER; September 3, 1955; 0738 GCT; 29°34'N, 125°40'W; sounding, 2300 fm; wind, 360°, force 4; weather, overcast; sea, very rough; wire angle, 02°.

0	17.85	33.85	5.56	0.5	0	17.85	33.85	5.56	0.5	24.45	349.2	0.000
10	17.82	33.86	5.63	0.4	10	17.82	33.86	5.63	0.4	24.46	347.9	0.035
25	17.70	33.86	5.58	0.4	20	17.73	33.86	5.59	0.4	24.48	346.0	0.070
49	17.68	33.86	5.59	0.4	30	17.70	33.86	5.59	0.4	24.49	344.6	0.104
64	16.91	33.78	5.80	0.4	50	17.65	33.86	5.60	0.4	24.51	343.4	0.173
78	16.60	33.97	5.85	0.4	75	16.66	33.93	5.84	0.4	24.80	316.5	0.256
99	16.36	34.05	5.79	0.4	100	16.31	34.05	5.77	0.4	24.96	300.0	0.334
123	15.27	33.91	5.71	0.4	150	13.57	33.74	5.47	0.6	25.32	265.5	0.477
152	13.43	33.73	5.44	0.6	200	10.12	33.59	4.76	1.3	25.86	215.4	0.600
200	10.12	33.59	4.76	1.3	250	8.79	33.81	3.96	1.7	26.24	178.6	0.700
263	8.54	33.87	3.77	1.8	300	7.82	33.95	3.13	2.0	26.50	154.3	0.786
355	6.88	34.04	2.29	2.4	400	6.39	34.08	1.70	2.6	26.81	125.3	0.931
470	5.82	34.14	0.98	2.9	500	5.62	34.16	0.80	2.9	26.96	110.5	1.055
624	4.98	34.27	0.49	3.1	600	5.10	34.25	0.57	3.1	27.09	98.3	1.166
843	4.17	34.41	0.49	3.2	700	4.68	34.31	0.49	3.2	27.19	88.8	1.267
1093	3.53	34.50	0.88	3.2	800	4.32	34.38	0.49	3.2	27.29	79.7	1.358
1400	2.95	34.58	1.17	3.1	1000	3.77	34.47	0.70	3.2	27.41	67.7	1.522
					1200	3.29	34.53	0.99	3.2	27.51	58.4	1.666

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
STRANGER; September 2, 1955; 0410 GCT; 29°17'N, 129°45'W; sounding, 2700 fm; wind, 040°, force 6; weather, overcast; sea, high; wire angle, 20°.												90
0	18.80	34.27	5.52		0	18.80	34.27	5.52		24.53	340.8	0.000
9	18.81	34.28	5.46		10	18.80	34.28	5.46		24.53	340.6	0.034
28	18.80	34.27	5.43		20	18.80	34.28	5.45		24.53	340.6	0.068
55	18.77	34.29	5.46		30	18.80	34.28	5.44		24.53	340.6	0.102
69	18.29	34.45	5.72		50	18.80	34.29	5.45		24.56	339.0	0.171
88	16.88	34.18	5.79		75	16.60	33.99	6.57		24.86	310.5	0.252
109	16.24	34.14	5.72		100	16.20	34.08	5.89		25.02	295.1	0.329
136	14.88	33.85	5.84		150	14.47	33.83	5.80		25.20	277.6	0.474
162	14.11	33.81	5.72		200	11.30	33.66	5.21		25.70	230.3	0.603
214	10.47	33.64	5.08		250	9.52	33.82	4.70		26.12	189.8	0.710
285	8.83	33.98	4.37		300	8.50	33.99	4.17		26.43	160.9	0.800
378	6.95	34.02	3.13		400	6.60	34.03	2.87		26.73	132.3	0.952
500	5.49	34.08	1.29		500	5.49	34.08	1.29		26.91	115.1	1.081
660	4.60	34.25	0.47		600	4.89	34.18	0.61		27.06	100.7	1.196
891	3.94	34.40	0.53		700	4.48	34.27	0.48		27.18	90.1	1.298
1152	3.41	34.49	0.98		800	4.20	34.33	0.49		27.26	82.2	1.391
1464	2.86	34.57	1.27		1000	3.72	34.44	0.70		27.40	69.4	1.559
					1200	3.32	34.51	1.02		27.48	60.8	1.707
STRANGER; August 31, 1955; 0842 GCT; 29°17'N, 132°57'W; sounding, 2300 fm; wind, 080°, force 5; weather, overcast; sea, very rough; wire angle, 19°, 25°.												91
0	19.30	34.29	5.62	-	0	19.30	34.29	5.62		24.42	351.5	0.000
10	19.28	34.27	5.56	-	10	19.28	34.27	5.56		24.42	352.3	0.035
24	19.26	34.29	5.30	-	20	19.26	34.28	5.40		24.43	351.0	0.070
53	19.14	34.36	5.45	-	30	19.22	34.30	5.36		24.45	349.2	0.106
62	19.05	34.35	5.48	-	50	19.18	34.35	5.40		24.50	343.9	0.175
71	18.50	34.42	5.35	-	75	18.32	34.45	5.39		24.79	317.1	0.258
85	18.04	34.50	5.47	-	100	17.72	34.52	5.43		24.99	297.8	0.336
103	17.68	34.52	5.41	-	150	16.61	34.38	4.99	0.4	25.15	282.1	0.483
125	17.19	34.47	5.31	0.3	200	13.74	33.97	5.16	0.8	25.46	252.9	0.619
153	16.55	34.37	4.95	0.4	250	10.40	33.85	4.49	1.5	26.01	201.0	0.735
201	13.70	33.96	5.17	0.8a)	300	8.60	33.92	3.97	1.9	26.36	167.3	0.830
271	9.34	33.87	4.19	1.7	400	6.99	34.02	3.01	2.4	26.67	137.8	0.988
370	7.41	34.01	3.45	2.2	500	5.72	34.09	1.55	2.9	26.89	117.3	1.122
499	5.75	34.09	1.59	2.9	600	5.05	34.18	0.85	3.2	27.04	103.2	1.238
684	4.62	34.29	0.49	3.4	700	4.56	34.31	0.51		27.20	88.0	1.340
					800	4.26	34.37	0.70		27.28	80.2	1.431
1	19.25u	34.31u	5.04u		1000	3.82	34.49	0.83		27.42	66.6	1.594
9	19.23u	34.31u	5.31u		1200	3.40	34.55	0.93		27.51	58.4	1.738
447	6.27	34.02	1.95		1500	2.87	34.60	1.38		27.60	50.0	1.929
606	5.01	34.18	0.83		2000	2.11	34.64	1.72		27.70	40.0	2.201
756	4.37	34.35	-									
935	3.96	34.47	0.80									
1114	3.58	34.53	0.87									
1365	3.05	34.58	1.20									
1618	2.72	34.61	1.42									
1898	2.23	34.63	2.11u									
2281	1.86	34.65	1.83									

a) Mean value of 0.7 and 0.9 μg at/L.

92 STRANGER; September 15, 1955; 0450 GCT; 31°42'N, 116°42.5'W; sounding, 90 fm; wind, 155°, force 1; weather, missing; sea, slight; wire angle, 00°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	18.29	33.52			0	18.29	33.52			24.08	383.8	0.000
10	14.70	33.45			10	14.70	33.45			24.86	309.9	0.035
					20	13.8						
					30	12.8						
					50	11.9						
					75	10.7						
					100	10.2						

93 STRANGER; September 15, 1955; 0910 GCT; 31°30.5'N, 117°06'W; sounding, 600 fm; wind, 325°, force 2; weather, missing; sea, slight; wire angle, 12°.

0	21.02	33.61			0	21.02	33.61			23.45	444.1	0.000
10	19.60	33.57			10	19.60	33.57			23.80	411.0	0.043
24	15.48	33.46			20	16.50	33.49			24.49	345.4	0.081
48	13.04	33.42			30	14.86	33.44			24.83	313.2	0.114
78	-	33.42			50	12.90	33.42			25.22	276.3	0.173
98	10.26	33.49			75	11.40	33.42			25.49	249.8	0.239
124p	9.24	33.80			100	10.20	33.51			25.78	223.2	0.299
254p	8.10	34.08			150	8.98	33.89			26.28	175.2	0.399
375p	7.26	34.29			200	8.50	34.00			26.44	160.4	0.485
662p	5.40	34.38			250	8.15	34.07			26.54	150.0	0.565
982p	4.18	34.47			300	7.77	34.17			26.69	136.4	0.639
					400	7.10	34.31			26.88	118.0	0.772
					500	6.50	34.34			26.99	107.8	0.891
					600	5.79	34.37			27.10	97.0	1.001
					700	5.17	34.39			27.21	86.8	1.101
					800	4.70	34.43			27.28	80.0	1.193

94 STRANGER; September 15, 1955; 1852, 2020 GCT; 31°01'N, 118°07'W; sounding, 850 fm; wind, 300°, force 4; weather, cloudy; sea, rough; wire angle, 08°, missing.

0	21.03	33.66			0	21.03	33.66			23.49	441.0	0.000
10	21.04	33.65			10	21.04	33.65			23.48	441.5	0.044
30	17.15	33.53			20	21.05	33.65			23.47	442.0	0.088
61	12.20	33.44			30	17.15	33.53			24.37	356.7	0.128
76	11.52	33.43			50	13.27	33.45			25.17	280.8	0.192
95	-	33.49			75	11.55	33.43			25.48	251.2	0.259
					100	9.70	33.65			25.97	204.1	0.317
110	9.26	33.73			150	8.82	33.97			26.36	167.4	0.411
139	8.89	33.91			200	8.10	34.03			26.52	152.0	0.492
168	8.67	34.04			250	8.70	34.32			26.66	139.3	0.567
225	8.96	34.31			300	8.10	34.31			26.74	131.3	0.638
301	8.04	34.31			400	7.22	34.32			26.87	118.8	0.769
402	7.20	34.32			500	6.38	34.39			27.05	102.1	0.886
540	6.07	34.76r			600	5.82	34.44			27.16	91.5	0.990
716	5.43	34.47			700	5.48	34.47			27.22	85.5	1.087
969p	4.39	34.31r			800	5.11	(34.49)			(27.29)	(78.6)	(1.178)
1212p	3.52	34.56			1000	4.27	(34.54)			(27.42)	(67.0)	(1.342)
1485p	2.90a)	34.56			1200	3.55	(34.56)			(27.50)	(59.2)	(1.487)

a) Mean value of 2.87 and 2.94°C.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

STRANGER; September 16, 1955; 0650, 0920 GCT; 30°20.5'N, 119°27'W; sounding, 2100 fm; wind, 335°, force 4; weather, missing; sea, rough; wire angle, 03°, 09°. 95

0	19.60	33.65	5.51	0	19.60	33.65	5.51	23.86	405.5	0.000
10	19.62	33.68	5.50	10	19.62	33.68	5.50	23.88	403.8	0.040
29	16.00	33.47	6.23	20	19.62	33.68	5.52	23.88	403.8	0.081
53	14.25	33.39	5.90	30	16.00	33.47	6.24	24.60	334.8	0.118
68	13.33	33.38	5.93	50	14.50	33.40	5.92	24.87	309.4	0.183
78	-	33.46	5.52	75	12.70	33.39	5.78	25.23	274.8	0.256
93	11.08	33.42	5.06	100	10.80	33.43	4.90	25.62	238.0	0.321
117	10.18	33.48	4.46	150	9.25	33.73	3.30	26.11	191.1	0.430
151	9.22	33.74	3.30	200	8.38	33.98	2.76	26.44	160.0	0.519
175	8.55	33.88	2.96	250	8.00	34.08	2.05	26.57	147.2	0.598
235	8.16	34.06	2.19	300	7.30	34.14	1.50	26.72	133.3	0.670
317	7.12	34.15	1.37	400	6.30	34.20	0.78	26.91	115.5	0.800
429	6.09	34.22	0.66	500	5.72	34.29	0.45	27.06	101.4	0.915
582	5.29	34.34	0.34	600	5.23	34.35	0.34	27.16	91.8	1.018
788	4.59a)	34.43	0.45	700	4.89	34.41	0.35	27.24	84.0	1.113
				800	4.55	34.43	0.45	27.30	78.5	1.202
0	-	33.67u	5.42u	1000	3.98	34.52	0.60	27.43	66.0	1.365
498	5.76	34.28	0.48	1200	3.44	34.56	0.85	27.51	58.3	1.508
573p	5.31	34.34	0.35	1500	2.74	34.60	1.22	27.61	48.8	1.697
701p	4.88	34.41	0.34	2000	2.06	34.66		27.72	38.4	1.962
879p	4.30	34.47	0.50	2500	1.73	34.67		27.75	35.7	2.195
1047p	3.84	34.53	0.66							
1280p	3.23	34.57	0.96							
1564p	2.60	34.60	1.33							
1876p	2.21	34.65	1.85							
2172p	1.88	34.67	-							
2609p	1.70	34.67	-							

STRANGER; September 16, 1955; 2035 GCT; 29°41'N, 120°43.5'W; sounding, 2050 fm; wind, 335°, force 4; weather, partly cloudy; sea, moderate; wire angle, 10°. 96

0	18.51	33.71	0	18.51	33.71	24.18	374.6	0.000
10	18.50	33.71	10	18.50	33.71	24.18	374.6	0.037
29	18.42	33.72	20	18.46	33.72	24.20	372.8	0.075
58	15.78	33.61	30	18.42	33.72	24.21	371.8	0.112
67	15.81	33.84	50	16.30	33.62	24.64	331.4	0.183
91	15.83	33.86	75	15.82	33.85	24.92	304.1	0.263
115	14.50	33.82	100	15.54	33.88	25.02	295.4	0.338
142	11.66	33.53	150	11.08	33.54	25.65	235.0	0.472
169	10.04	33.59	200	8.98	33.79	26.20	182.7	0.579
225	8.38	33.94	250	7.96	34.00	26.52	151.9	0.665
298	7.29	34.05	300	7.28	34.05	26.66	139.4	0.740
331p	6.87u	34.07	400	6.30	34.14	26.86	120.2	0.875
395	6.34	34.13	500	5.78	34.23	27.00	106.9	0.995
523	5.65	34.25	600	5.37	34.31	27.11	96.1	1.103
933	4.30	34.49	700	5.04	34.37	27.19	88.8	1.203
1199	3.44	34.54	800	4.72	34.43	27.28	80.0	1.296
1513	2.84	34.60	1000	4.08	34.51	27.41	67.8	1.461
			1200	3.44	34.54	27.49	59.8	1.608
			1500	2.87	34.60	27.60	50.2	1.803

a) Mean value of 4.56 and 4.62°C.

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

97 STRANGER; September 17, 1955; 1240, 1315, 1500 GCT; 28°43'N, 122°37.5'W; sounding, missing; wind, 335°, force 3; weather, partly cloudy; sea, moderate; wire angle, 06°, missing, 23°.

0	18.22	33.71	5.50	0	18.22	33.71	5.50		24.25	368.0	0.000
10	18.24	33.69	5.68	10	18.24	33.69	5.68		24.23	370.0	0.037
30	18.41	33.78	5.60	20	18.35	33.72	5.62		24.23	370.0	0.074
55	17.29	33.77	5.77	30	18.41	33.78	5.60		24.26	367.4	0.111
70	16.27	33.73	5.95	50	17.62	33.78	5.72		24.45	348.6	0.183
80	15.84	33.82	5.94	75	16.10	33.77	5.97		24.80	315.8	0.266
95	15.16	33.78	5.62	100	15.10	33.80	5.65		25.04	292.8	0.343
				150	12.53	33.67	5.23		25.48	251.0	0.481
118	15.46	34.04	5.56	200	9.62	33.63	4.89		25.96	205.0	0.596
152	12.39	33.66	5.23	250	8.35	33.85	3.88		26.34	169.3	0.692
175	10.85	33.58	5.06	300	7.62	34.01	3.13		26.57	147.5	0.773
222p	8.80u	33.73	4.59	400	6.46	34.14	1.32		26.84	122.1	0.913
313p	7.42	34.04	2.91	500	5.85	34.26	0.63		27.01	105.8	1.033
438p	6.16	34.16u	1.02	600	5.20	34.32	0.37		27.13	94.0	1.139
608p	5.16	34.33u	0.36u	700	4.74	34.35	0.38		27.23	85.0	1.236
				800	4.39	34.44	0.50		27.33	75.5	1.323
0	-	33.71	5.46u	1000	3.88	34.49	0.72		27.42	67.0	1.483
9	18.22u	33.69u	5.47u								
352p	6.94	34.09	1.96								
449	6.10	34.19u	0.94								
533p	5.71	34.29	0.50								
604	5.17	34.30u	0.41u								
662p	4.91	34.33	0.37								
754	4.53	34.42	0.41								
886p	4.16	34.46	0.59								
1130p	3.60	34.54	0.85								

98 STRANGER; August 15, 1955; 0016, 0031, 0155 GCT; 27°26'N, 125°31'W; sounding, 2400 fm; wind, 030°, force 6; weather, overcast; sea, high; wire angle, 15°, 15°, 18°.

0	19.4	34.19	5.54	0.4	0	19.4	34.19	5.54	0.4	24.32	361.5	0.000
9	19.32	34.21	5.50	0.4	10	19.32	34.21	5.51	0.4	24.36	357.6	0.036
					20	19.32	34.21	5.51	0.4	24.37	357.3	0.072
24	19.32	34.22	5.51	0.4	30	19.26	34.22	5.52	0.4	24.38	355.8	0.108
53	18.83	34.17	5.61	0.4	50	18.95	34.18	5.57	0.4	24.43	350.9	0.179
68	18.06	34.16	5.63	0.4	75	17.70	34.12	5.40	0.4	24.69	325.6	0.264
82	17.46	34.10	5.34	0.4	100	17.00	34.08	5.47	0.4	24.83	312.8	0.344
108	16.59	34.04	5.59	0.4	150	14.43	33.86	5.25	0.5	25.23	274.5	0.493
132	15.61	34.00	5.28	0.4	200	10.80	33.63	4.81	1.2	25.77	223.5	0.620
161	13.81	33.78	5.21	0.6	250	8.83	33.78	3.86	1.7	26.21	182.0	0.723
212	10.03	33.61	4.59	1.4	300	7.89	33.95	3.08	2.0	26.49	155.0	0.810
					400	6.60	34.09	1.74	2.6	26.78	127.5	0.957
265	8.52	33.85	3.66	1.8	500	5.62	34.15	0.92	3.0	26.94	111.8	1.082
364	7.02	34.06	2.14	2.4	600	5.00	34.24	0.47	3.1	27.09	98.2	1.193
488	5.76	34.14	1.01	2.9	700	4.65	34.33	0.45	3.2	27.21	86.8	1.292
654	4.77	34.30	0.42	3.2	800	4.40	34.44	0.47	3.2	27.32	76.0	1.381
878	4.20	34.47	0.57	3.2	1000	3.87	34.50	0.71	3.1	27.43	66.3	1.540
1133	3.52	34.54	0.96	3.1	1200	3.38						
1459	2.93	34.00r	2.70r	2.2r								

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

STRANGER; August 16, 1955; 1614, 1638 GCT; 27°26'N, 128°34'W; sounding, 2550 fm; wind, 345°, force 5; weather, overcast; sea, very rough; wire angle, 09°, 10°. 99

0	18.84	34.14	5.64	0.4	0	18.84	34.14	5.64	0.4	24.43	351.4	0.000
10	18.83	34.10	5.70	0.4	10	18.83	34.10	5.70	0.4	24.40	354.1	0.035
25	18.82	34.11	5.58	0.3	20	18.82	34.11	5.63	0.3	24.40	353.6	0.071
56	18.80	34.14	5.63	0.3	30	18.81	34.12	5.63	0.3	24.42	352.2	0.106
69	18.22	34.07	5.74	0.3	50	18.80	34.14	5.63	0.3	24.43	350.9	0.177
85	17.47	34.08	5.90	0.3	75	17.87	34.06	5.82	0.3	24.61	334.2	0.263
110	17.11	34.17	5.64	0.3	100	17.75	34.33	5.67	0.3	24.84	311.5	0.344
134	16.61	33.96	5.51	0.3	150	15.83	33.75	5.49	0.4	24.85	311.0	0.502
164	15.02	33.59	5.47	0.5	200	11.80	33.57	5.01	1.0	25.53	245.9	0.643
					250	9.28	33.83	4.24	1.5	26.18	184.3	0.753
213	10.43	33.62	4.77	1.2	300	8.17	33.99	3.35	1.9	26.48	156.2	0.841
281	8.56	33.96	3.75	1.8	400	6.54	34.08	1.94	2.5	26.79	127.4	0.988
383	6.78	34.07	2.13	2.4	500	5.55	34.13	1.10	2.9	26.94	112.1	1.114
506	5.50	34.13	1.05	2.9	600	5.05	34.19	0.88	3.0	27.05	102.1	1.227
898	4.04	34.46	0.73	3.1	700	4.66	34.28	0.81	3.1	27.16	91.3	1.331
1164	3.43	34.54	0.98	3.1	800	4.32	34.37	0.76	3.1	27.28	80.2	1.424
					1000	3.78	34.50	0.81	3.1	27.43	66.0	1.587

STRANGER; August 18, 1955; 0150, 0200, 0243 GCT; 27°26'N, 131°38'W; sounding, 2400 fm; wind, 045°, force 4; weather, overcast; sea, rough; wire angle, 14°, 16°, 22°. 100

0	19.7	34.40	5.45	0.4	0	19.7	34.40	5.45	0.4	24.41	353.0	0.000
10	19.61	34.35	5.61	0.4	10	19.61	34.35	5.61	0.4	24.39	355.0	0.035
					20	19.58	34.37	5.53	0.4	24.42	351.9	0.071
25	19.53	34.38	5.48	0.4	30	19.53	34.38	5.47	0.4	24.44	349.8	0.106
53	18.18	-	-	-	50	18.72	34.36	5.60	0.4	24.63	331.9	0.175
68	17.81	34.33	5.73	0.4	75	17.61	34.32	5.74	0.4	24.86	310.0	0.255
82	17.36	34.30	5.76	0.3	100	16.86	34.30	5.75	0.3	25.03	293.7	0.332
105	16.74	34.29	5.74	0.3	150	15.38	34.14	5.47	0.5	25.25	273.2	0.475
129	16.35	34.25	5.60	0.4	200	11.29	33.76	4.98	1.0	25.78	222.4	0.601
156	14.92	34.09	5.45	0.5	250	9.28	33.92	3.99	1.6	26.25	177.6	0.704
206	10.94	33.76	4.89	1.1	300	8.56	34.08	3.02	2.1	26.49	154.7	0.790
269	8.90	33.97	3.66	1.8	400	7.71	34.19	1.30	2.8	26.70	134.5	0.941
362	8.08	34.18	1.43	2.7	500	6.55	34.20	0.98	2.9	26.88	118.0	1.075
484	6.72	34.20	0.98	2.9	600	5.39	34.25	0.64	3.1	27.06	100.8	1.192
					700	4.71	34.33	0.48	3.2	27.20	87.5	1.294
627p	5.15	34.26	0.59	3.2	800	4.40	34.40	0.40	3.3	27.29	78.6	1.385
847p	4.28	34.43	0.38	3.3								

STRANGER; August 19, 1955; 1414 GCT; 27°26'N, 134°45'W; sounding, 2300 fm; wind, 050°, force 3; weather, very cloudy; sea, rough; wire angle, 08°. 101

0	19.6	34.61	5.49	0.3	0	19.6	34.61	5.49	0.3	24.59	335.5	0.000
10	19.60	34.63	5.59	0.3	10	19.60	34.63	5.59	0.3	24.61	334.3	0.034
25	19.59	34.62	5.42	0.3	20	19.60	34.62	5.45	0.3	24.61	334.2	0.067
50	19.68	34.80	5.50	0.2	30	19.61	34.66	5.44	0.3	24.63	331.9	0.101
65	19.17	35.03	5.63	0.2	50	19.68	34.80	5.50	0.2	24.71	324.0	0.166
79	18.24	34.78	5.55	0.2	75	18.40	34.81	5.58	0.2	25.05	291.9	0.244
97	17.95	34.76	5.52	0.2	100	17.93	34.77	5.52	0.2	25.13	284.0	0.317
124	17.94	34.87	5.52	0.2	150	17.68	34.82	5.48	0.2	25.23	274.8	0.458
153	17.56	34.78	5.44	0.3	200	14.85	34.27	4.90	0.5	25.46	252.9	0.593
200	14.85	34.27	4.90	0.5	250	11.80	33.94	5.01	0.9	25.82	219.1	0.714
257	11.42	33.92	5.03	1.0	300	9.88	33.96	4.79	1.3	26.18	184.0	0.817
354	8.32	34.00	4.23	1.7	400	7.30	34.00	3.51	2.0	26.62	143.3	0.987
468	6.13	34.00	2.61	2.4	500	5.78	34.01	2.26	2.5	26.83	123.4	1.127
622	4.92	34.18	0.83	3.0	600	5.03	34.13	1.20	2.9	27.01	106.0	1.248
840	4.20	34.40	0.55	3.2	700	4.63	34.24	0.58	3.1	27.14	93.8	1.355
1088	3.56	34.51	0.95	3.1	800	4.32	34.36	0.55	3.2	27.27	81.4	1.450
1389	3.32	34.54	1.24	3.0	1000	3.77	34.49	0.79	3.2	27.43	66.2	1.614
					1200	3.43	34.53	1.08	3.1	27.49	60.2	1.758

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

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STRANGER; August 20, 1955; 1050, 1215, 1352 GCT; 27°26'N, 137°43.5'W; sounding, 2480 fm; wind, 060°, force 3; weather, partly cloudy; sea, rough; wire angle, 05°, 12°, 18°.

0	20.65	34.99	5.36	0.3	0	20.65	34.99	5.36	0.3	24.61	334.4	0.000
10	20.65	34.98	5.43	0.3	10	20.65	34.98	5.43	0.3	24.60	335.0	0.034
25	20.48	34.98	5.38	0.3	20	20.52	34.98	5.38	0.3	24.62	332.6	0.067
55	20.28	35.01	5.34	0.3	30	20.42	34.99	5.35	0.3	24.66	329.4	0.100
65	19.08	34.90	5.59	0.3	50	20.30	35.01	5.33	0.3	24.70	325.0	0.166
75	18.64	34.87	5.60	0.3	75	18.64	34.87	5.60	0.3	25.03	293.9	0.243
90	18.74	34.88	5.49	0.3	100	18.42	34.93	5.42	0.3	25.13	284.1	0.316
110	18.17	34.88	5.39	0.3	150	(17.45)	(34.76)	5.25	0.3	(25.24)	(273.5)	(0.458)
135	17.97	34.87	5.33	0.3	200	(14.55)	(34.34)	5.14	0.6	(25.58)	(242.0)	(0.589)
285p	9.71	34.00	4.72	1.3	250	(11.35)	(34.10)	4.88	1.0	(26.03)	(198.9)	(0.702)
550p	5.26u	34.09	1.38	3.0	300	9.30	33.99	4.65	1.4	26.30	173.2	(0.798)
					400	7.35	33.98	3.70	1.9	26.60	145.4	(0.963)
0	20.69u	35.00u	5.47u	0.3	500	6.00	34.02	2.21	2.5	26.80	125.5	(1.105)
479	6.21	34.01	2.53	2.4	600	5.18	34.11	1.22	3.0	26.97	109.5	(1.229)
647	4.87	34.18	0.76	3.1	700	4.58	34.22	0.55	3.2	27.15	93.0	(1.337)
807	4.14	34.34	0.42	3.3	800	4.16	34.33	0.42	3.3	27.27	81.5	(1.432)
1043	3.56	34.51	0.87	3.2	1000	3.66	34.48	0.80	3.2	27.43	66.0	(1.595)
1278	3.14	34.56	1.25	3.1	1200	3.28	34.55	1.14	3.1	27.52	57.0	(1.735)
1609	2.53	34.61	1.51	3.1	1500	2.73	34.60	1.45	3.1	27.61	48.8	(1.921)
1992	2.07	34.67u	1.88	3.0	2000	2.07	34.64	1.84	3.0	27.70	40.0	(2.190)
2403	1.79	34.66	2.26	2.9	2500	1.73	34.66	2.35	2.8	27.74	36.5	(2.428)
					3000	1.56	34.68	2.72	2.8	27.77	33.7	(2.652)
2862	1.59	34.67	2.70	2.7								
3351	1.50	34.69	2.76	2.8								
3862	1.50	34.69	3.09	2.7								

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STRANGER; August 21, 1955; 1129 GCT; 27°30.5'N, 140°49'W; sounding, 2640 fm; wind, 045°, force 5; weather, overcast; sea, rough; wire angle, 06°.

0	21.81	35.40	5.13	0.2	0	21.81	35.40	5.13	0.2	24.60	335.0	0.000
10	21.80	35.37	5.22	0.2	10	21.80	35.37	5.22	0.2	24.58	336.8	0.034
25	21.78	35.37	5.16	0.2	20	21.78	35.37	5.14	0.2	24.58	336.8	0.067
50	21.14	35.32	5.28	0.2	30	21.74	35.37	5.14	0.2	24.60	335.4	0.101
65	20.47	35.26	5.47	0.2	50	21.14	35.32	5.28	0.2	24.72	323.2	0.167
79	19.64	35.21	5.41	0.2	75	19.85	35.22	5.44	0.2	24.99	297.9	0.246
100	19.18	35.16	5.46	0.2	100	19.18	35.16	5.46	0.2	25.12	285.4	0.319
124	18.63	35.07	5.13	0.2	150	18.12	34.95	5.14	0.2	25.23	275.0	0.462
154	18.02	34.93	5.17	0.3	200	14.74	34.38	5.06	0.5	25.58	242.3	0.594
206	14.38	34.33	5.04	0.6	250	12.03	34.20	5.05	0.9	25.98	203.6	0.708
265	11.51	34.18	5.07	1.0	300	10.70	34.14	4.97	1.2	26.19	184.1	0.808
356	9.49	34.09	4.61	1.4	400	8.40	34.08	4.13	1.7	26.51	152.6	0.984
472	6.62	34.08	3.36	2.2	500	6.22	34.08	3.02	2.3	26.83	123.4	1.129
626	5.01	34.11	1.25	2.9	600	5.18	34.10	1.58	2.8	26.97	109.7	1.253
844	3.98	34.34	0.54	3.2	700	4.62	34.16	0.91	3.1	27.07	100.0	1.365
1092	3.41	34.52	0.93	3.2	800	4.17	34.28	0.58	3.2	27.22	85.4	1.464
1392	3.33	34.51	1.43	2.9	1000	3.56	34.45	0.80	3.2	27.42	66.8	1.632
					1200	3.37	34.50	1.15	3.0	27.47	61.9	1.778

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

STRANGER; August 22, 1955; 0925, 1000, 1225, 1330 GCT; 27°28'N, 144°00'W; sounding, 2400 fm; wind, 045°, force 6; weather, overcast; sea, rough; wire angle, 13°, 13°, 18°, 20°. 104

0	22.23	35.43	5.26	0.2	0	22.23	35.43	5.26	0.2	24.50	344.1	0.000
10	22.26	35.45	5.19	0.2	10	22.26	35.45	5.19	0.2	24.50	343.9	0.034
24	22.22	35.43	5.07	0.2	20	22.22	35.43	5.05	0.2	24.50	344.0	0.069
49	22.22	35.41	5.12	0.2	30	22.22	35.43	5.10	0.2	24.50	344.4	0.103
58	22.17	35.41	5.00	0.2	50	22.22	35.41	5.13	0.2	24.49	344.8	0.173
68	20.40	35.32	5.45	0.2	75	20.16	35.29	5.49	0.2	24.96	300.6	0.254
78	20.02	35.27	5.49	0.2	100	19.43	35.20	5.37	0.2	25.08	289.1	0.328
					150	18.2	35.03	5.20	0.2	25.26	272.0	0.471
140p	18.4	35.07	5.20	0.2	200	16.2	34.51	4.98	0.6	25.36	262.8	0.608
218p	14.9	34.25	4.88	0.8	250	13.01	34.13	4.78	1.0	25.74	226.1	0.733
323p	10.02	34.06	4.71	1.3	300	10.80	34.07	4.74	1.2	26.11	191.2	0.841
469p	6.93u	34.02	3.45u	2.1	400	8.28	34.04	4.10	1.6	26.50	154.6	1.020
592p	5.50	34.09	1.09u	3.0u	500	6.62	34.03	2.84	2.3	26.73	132.5	1.171
					600	5.37	34.10	1.30	2.9	26.94	112.8	1.300
0	22.24u	35.44u	5.04u	0.2	700	4.69	34.19	0.55	3.1	27.10	97.5	1.413
8	22.18u	35.45u	5.26u	0.2	800	4.21	34.31	0.48	3.2	27.24	84.0	1.507
464	7.22u	34.02	3.22u	2.0	1000	3.66	34.45	0.64	3.2	27.42	67.2	1.677
633	5.08	34.12	1.12u	3.0u	1200	3.27	34.53	1.05	3.1	27.51	58.4	1.810
790	4.25	34.29	0.47	3.2	1500	2.74	34.59	1.45	3.1	27.61	49.2	2.009
977	3.68	34.43	0.58	3.2	2000	2.04	34.65	1.90	2.9	27.71	39.2	2.279
1084	3.56	34.50	0.87	3.2								
1345	2.99	34.57	1.27	3.1								
1608	2.56	34.61	1.57	3.1								
1897	2.12	34.61u	1.84	3.0								
2293	1.85	34.67	2.03	2.8								

STRANGER; August 23, 1955; 1107 GCT; 27°28'N, 146°56.5'W; sounding, 2850 fm; wind, 080°, force 7; weather, partly cloudy; sea, very rough; wire angle, 05°. 105

0	22.51	35.48	5.26	0.3	0	22.51	35.48	5.26	0.3	24.46	348.2	0.000
10	22.52	35.48	5.18	0.2	10	22.52	35.48	5.18	0.2	24.45	348.6	0.035
25	22.50	35.48	5.12	0.2	20	22.50	35.48	5.12	0.2	24.46	348.0	0.070
50	22.32	35.49	-	0.2	30	22.48	35.48	5.11	0.2	24.47	346.7	0.105
65	22.25	35.53	5.13	0.2	50	22.32	35.49	5.12	0.2	24.52	342.5	0.174
80	20.73	35.32	5.48	0.2	75	21.20	35.40	5.38	0.2	24.76	319.4	0.257
99	19.86	35.07	5.30	0.2	100	19.82	35.07	5.29	0.2	24.88	308.2	0.336
124	18.82	35.24u	5.17	0.3	150	17.99	34.94	5.24	0.3	25.25	273.4	0.484
154	17.84	34.92	5.23	0.3	200	15.28	34.49	4.66	0.5	25.53	246.2	0.616
202	15.22	34.48	4.64	0.5	250	12.42	34.18	4.87	0.9	25.88	212.8	0.734
265	11.88	34.14	4.90	1.0	300	11.02	34.13	4.84	1.1	26.11	191.2	0.837
356	9.74	34.14	4.70	1.4	400	8.75	34.10	4.46	1.6	26.47	156.6	1.018
471	7.10	34.01	3.82	2.0	500	6.62	34.01	3.53	2.2	26.71	134.	1.171
626	5.05	34.09	1.57	2.9	600	5.25	34.08	1.88	2.8	26.94	112.3	1.301
843	4.01	34.33	0.44	3.2	700	4.60	34.17	0.90	3.1	27.09	98.4	1.413
1092	3.50	34.49	0.90	3.2	800	4.16	34.30	0.45	3.2	27.23	84.4	1.512
1395	2.93	34.58	1.47	3.2	1000	3.68	34.44	0.70	3.2	27.40	69.3	1.681
					1200	3.29	34.52	1.05	3.2	27.50	59.4	1.827

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OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

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STRANGER; August 24, 1955; 0835, 1021, 1138 GCT; 27°25'N, 150°00'W; sounding, 2800 fm; wind, 100°, force 6; weather, slight rain showers; sea, very rough; wire angle, 07°, 16°, 10°.

0	23.62	35.30	5.11	0	23.62	35.30	5.11	24.00	391.8	0.000
10	23.62	35.32	5.03	10	23.62	35.32	5.03	24.02	390.5	0.039
25	23.63	35.31	5.08	20	23.65	35.31	5.05	24.01	391.0	0.078
55	23.62	35.31	4.97	30	23.66	35.31	5.02	24.01	391.0	0.118
65	22.21	35.33	5.51	50	23.66	35.31	4.98	24.00	391.9	0.196
75	21.23	35.31	5.55	75	21.23	35.31	5.55	24.68	326.8	0.287
90	20.44	35.23	5.48	100	20.00	35.19	5.30	24.92	303.8	0.366
109	19.63	35.16	5.14	150	18.38	35.01	5.13	25.21	277.4	0.514
134	18.84	35.08	5.03	200	15.88	34.57	5.10	25.46	252.8	0.649
163	17.97	34.93	5.24	250	13.44	34.31	4.91	25.78	222.0	0.771
216	14.87	34.42	4.97	300	11.70	34.21	4.97	26.06	196.5	0.879
291	11.96	34.22	4.97	400	9.27	34.09	4.63	26.38	165.5	1.067
396	9.37	34.09	4.65	500	7.22	34.00	4.10	26.62	142.7	1.229
534	6.58	33.97	4.08	600	5.75	33.98	2.92	26.81	125.3	1.370
724	4.44	34.13	1.03	700	4.65	34.10	1.27	27.02	104.3	1.492
				800	4.18	34.20	0.93	27.16	91.2	1.597
0	23.60u	35.28u	5.04u	1000	3.59	34.40	0.45	27.37	71.8	1.776
9	23.56u	35.28u	4.99u	1200	3.16	34.53	1.03	27.52	57.3	1.921
482	7.70u	34.02	4.14	1500	2.65	34.57	1.55	27.60	49.5	2.108
649	5.24	34.02	2.15	2000	2.01	34.59	1.98	27.68	42.5	2.384
808	4.15	34.21	0.90							
994	3.61	34.39	0.42							
1181	3.18	34.52	1.00							
1442	2.72	34.57	1.44							
1708	2.41	34.58	1.72							
2046	1.95	34.60	2.05							
2343	1.74	34.62	2.38							

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STRANGER; September 21, 1955; 1053 GCT; 29°50'N, 115°51'W; sounding, 50 fm; wind, 340°, force 4; weather, sky obscured; sea, moderate; wire angle, 02°.

0	16.87	33.51	6.01	0.5	0	16.87	33.51	6.01	0.5	24.42	351.8	0.000
10	16.88	33.50	6.07	0.5	10	16.88	33.50	6.07	0.5	24.41	352.9	0.035
15	15.59	33.48	6.43	0.5	20	14.80	33.46	6.30	0.6	24.85	311.1	0.068
25	14.11	33.44	6.15	0.7	30	13.30	33.41	5.90	0.8	25.13	284.4	0.098
34	12.58	33.40	5.69	0.9	50	10.90	33.48	4.40	1.5	25.64	236.1	0.151
43	11.80	33.42	5.21	1.1	75	9.88	33.73	2.80	2.0	26.01	201.4	0.206
53	10.60	33.52	4.09	1.6								
67	9.86	33.64	3.50	1.9								
76	9.92	33.75	2.75	2.0								

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

STRANGER; September 21, 1955; 0555, 0645 GCT; 29°43'N, 116°02'W; sounding, 900 fm; wind, 340°, force 4; weather, sky obscured; sea, rough; wire angle, 32°, 32°. 108

0	19.44	33.60	5.60	0.5	0	19.44	33.60	5.60	0.5	23.85	405.6	0.000	
10	19.44	33.60	5.61	0.4	10	19.44	33.60	5.61	0.4	23.85	405.6	0.041	
25	17.04	33.51	6.01	0.5	20	18.00	33.54	5.91	0.4	24.17	375.9	0.080	
50	13.81	33.47	6.16	0.6	30	16.37	33.50	6.05	0.5	24.53	341.2	0.115	
62	12.53	33.40	5.72	0.8	50	13.81	33.47	6.16	0.6	25.07	290.4	0.179	
78	-	33.46	5.41	1.1	75	11.90	33.40		1.0	25.39	259.5	0.248	
					100	10.83	33.45		1.3	25.62	237.7	0.311	
76p	11.83	33.42	5.62	1.0									
97	10.98	33.44	5.00	1.2									
99p	10.62r	33.42u	5.02u	1.3									
121	10.15	33.55	4.30	1.5									
143	10.12	33.83	2.87	2.0									
728	4.99	34.43	0.33	3.3									
948	3.92	34.51	0.62	3.2									
1229	3.26	34.55	0.98	3.1									
					800	4.58	34.46	0.35	3.3	27.32	76.1		
					1000	3.77	34.52	0.72	3.2	27.46	63.2		
					1200	3.32	34.55	0.92	3.1	27.51	57.8		

STRANGER; September 21, 1955; 0050, 0155 GCT; 29°35'N, 116°20.5'W; sounding, 1275 fm; wind, 330°, force 4; weather, cloudy; sea, moderate; wire angle, 21°, 21°. 109

0	20.91	33.75	5.29	0.5	0	20.91	33.75	5.29	0.5	23.59	431.0	0.000	
10	20.94	33.75	5.28	0.5	10	20.94	33.75	5.28	0.5	23.58	432.0	0.043	
28	17.69	33.55	5.78	0.5	20	19.70	33.66	5.45	0.5	23.84	407.2	0.085	
57	14.42	33.39	6.18	0.5	30	17.50	33.54	5.80	0.5	24.29	363.8	0.124	
70	13.46	33.39	5.99	0.6	50	15.02	33.42	6.13	0.5	24.77	318.9	0.192	
91	-	33.39	5.56	1.0	75	13.10	33.39	5.85	0.7	25.15	282.5	0.268	
					100	11.18	33.42	4.95	1.3	25.54	245.5	0.334	
108	10.61	33.45	4.64	1.4	150	10.35	33.99	2.05	2.5	26.12	190.0	0.445	
134	9.82	33.64	3.70	1.8	200	10.30	34.27	0.70	2.7	26.35	168.1	0.536	
153	10.43	34.05	1.68	2.6	250	9.68	34.34	0.47	2.6	26.51	153.0	0.619	
190	10.42	34.25	1.08	2.7	300	9.52	34.52	0.44	2.9	26.68	137.2	0.694	
243	9.74	34.32	0.44	2.6	400	7.52	34.32	0.45	2.9	26.83	123.0	0.831	
311	9.50	34.52	0.44	2.9	500	(6.50)	(34.35)	(0.46)	(3.1)	(27.00)	(107.2)	(0.953)	
405	7.41	34.31	0.85u	2.9									
495	6.58	34.34	0.45	3.1									

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

110 STRANGER; September 20, 1955; 0830, 0915, 1135, 1300 GCT; 28°56'N, 117°38'W; sounding, 2050 fm; wind, 330°, force 3; weather, sky obscured; sea, rough; wire angle, 33°, 34°, 37°, missing.

0	20.62	33.68	5.32	0.5	0	20.62	33.68	5.32	0.5	23.61	429.0	0.000
8	20.64	33.68	5.24	0.4	10	20.65	33.68	5.25	0.4	23.61	429.5	0.043
26	17.89	33.53	5.66	0.5	20	19.50	33.61	5.40	0.4	23.86	405.4	0.085
46	15.08	33.40	5.99	0.5	30	17.20	33.49	5.75	0.5	24.33	360.0	0.123
59	14.18	33.39	5.88	0.6	50	14.80	33.39	5.95	0.5	24.80	316.0	0.191
					75	13.00	33.47	5.51	0.8	25.23	274.8	0.265
60	14.12	33.39	5.97u	0.6u	100	11.35	33.61	3.65	1.6	25.65	234.5	0.330
69	13.47	33.48	5.69	0.7a)	150	9.50	34.02	2.79	2.1	26.30	173.5	0.433
84	12.28	33.44	5.23	1.0	200	8.62	34.04	2.65	2.3	26.45	159.0	0.518
106	11.05	33.66	3.31	1.8	250	7.90	34.08	2.10	2.4	26.59	145.6	0.596
122	10.39	33.72	3.15	1.9	300	7.18	34.10	1.78	2.5	26.71	134.0	0.668
154	9.20	34.00	2.78	2.1	400	6.46	34.22	0.90	2.9	26.90	116.4	0.799
199p	8.62	34.04	2.65	2.2	500	6.02	34.33	0.40	3.1	27.05	102.2	0.915
211	8.84	34.18	1.83	2.5	600	5.50	34.35	0.38	3.2	27.12	94.6	1.020
260p	7.66	34.06	2.14	2.4	700	5.00	34.38	0.40	3.2	27.20	87.2	1.118
390p	6.55u	34.20	0.99u	2.9	800	4.64	34.44	0.45	3.2	27.30	78.2	1.209
					1000	3.93	34.50	0.68	3.2	27.41	67.5	1.372
0	20.83u	33.69u	5.38u	0.5	1200	3.37	34.54	0.95	3.2	27.51	58.2	1.516
8	20.79u	33.68	5.51u	0.5u	1500	2.83	34.61	1.35	3.1	27.61	48.8	1.706
392	6.52	34.21	1.07	2.9								
525	5.92	34.34	0.38	3.2								
654	5.19	34.36	0.38	3.2								
809	4.60	34.45	0.46	3.3								
966	4.04	34.49	0.63	3.3								
1191	3.39	34.54	-	-								
1421	3.00	34.60	1.19	3.1								
1520	2.79	34.61	1.34	3.1								
1877	2.21	34.65	1.92	3.0								

111 STRANGER; September 19, 1955; 0230 GCT; 27°56'N, 119°35'W; sounding, 2075 fm; wind, 345°, force 3; weather, missing; sea, rough; wire angle, 09°.

0	19.63	33.62	5.50	0	19.63	33.62	5.50		23.83	408.1	0.000
10	19.64	33.61	5.41	10	19.64	33.61	5.41		23.81	409.9	0.041
30	17.79	33.57	5.89	20	19.60	33.61	5.40		23.83	408.1	0.082
60	15.56	33.51	5.90	30	17.79	33.57	5.89		24.25	368.1	0.121
75p	14.70	33.48	5.90	50	16.15	33.53	6.00		24.60	334.5	0.191
99p	12.97	33.43	5.74	75	14.70	33.48	5.90		24.88	307.5	0.272
143p	10.20	33.57	4.39	100	12.96	33.43	5.74		25.21	276.8	0.346
208p	9.53	34.19	1.94	150	9.82	33.60	4.10		25.91	210.0	0.469
287p	9.09	34.42	0.62	200	9.37	34.02	3.70		26.31	172.0	0.566
395p	7.59	34.36	0.49	250	9.40	34.40	2.30		26.61	144.0	0.647
532p	6.35	34.38	0.25	300	8.98	34.42	0.61		26.69	136.0	0.720
728p	5.28	34.44	0.30	400	7.50	34.36	0.47		26.87	119.4	0.854
942p	4.28	34.49	0.50	500	6.56	34.37	0.30		27.01	106.0	0.973
1197p	3.56	34.52	0.74	600	5.94	34.40	0.25		27.12	95.5	1.081
				700	5.43	34.43	0.29		27.20	87.8	1.181
				800	4.93	34.46	0.34		27.27	80.1	1.274
				1000	4.09	34.50	0.55		27.40	68.7	1.438
				1200	(3.55)	(34.52)	(0.75)		(27.47)	(62.1)	(1.590)

a) Mean value of 0.6 and 0.8 μg at/L.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

STRANGER; September 18, 1955; 0510, 0735, 0845 GCT; 26°53'N, 121°39'W; sounding, 2200 fm; wind, 360°, force 3; weather, missing; sea, moderate; wire angle, 07°, 27°, 28°. 112

0	20.65	33.73	5.26		0	20.65	33.73	5.26		23.65	425.3	0.000
10	20.66	33.80	5.24		10	20.66	33.80	5.24		23.69	421.0	0.042
30	17.97	33.56	5.84		20	18.80	33.62	5.70		24.04	388.2	0.083
56	16.96	33.78	5.90		30	17.97	33.56	5.84		24.20	372.8	0.121
70	16.10	33.78	5.90		50	17.25	33.74	5.90		24.51	342.6	0.193
80	15.75	33.75	5.87		75	15.90	33.76	5.90		24.84	312.1	0.275
95	15.10	33.69	5.72		100	13.90	33.39	5.95		25.00	296.8	0.352
118	13.67	33.58	5.45		150	10.42	33.78	3.73		25.94	207.0	0.480
150	10.42	33.78	3.73		200	8.70	34.15	(2.25)		26.52	151.9	0.571
172	9.37	34.11	2.36	a)	250	8.55	34.31	(2.07)		26.67	137.5	0.646
226	8.78	34.26	3.49	a)	300	8.02	34.34	(1.40)		26.77	128.0	0.715
303	7.98	34.34	0.62u		400	6.92	34.31	(0.67)		26.90	116.0	0.843
330p	7.72	34.30u	0.35u		500	6.22	34.37	0.45		27.05	101.9	0.958
408	6.85	34.31	1.37u		600	5.57	34.41	0.35		27.15	92.0	1.063
555	5.83	34.39	1.09u		700	5.05	34.46	0.33		27.27	81.0	1.157
					800	4.60	34.50	0.49		27.35	73.0	1.242
0	20.55u	33.75u	5.23u		1000	3.96	34.54	0.70		27.45	64.0	1.396
10	20.52u	33.77u	5.28u		1200	3.41	34.56	0.85		27.52	56.8	1.536
452	6.54	34.35	0.53		1500	2.87	34.61	1.25		27.61	48.6	1.723
613	5.50	34.42	0.33		2000	2.10	34.67	2.00		27.73	37.8	1.988
769	4.72	34.49	0.39									
904	4.24	34.52	0.64									
1082	3.71	34.60u	0.71									
1329	3.10	34.58	1.05									
1578	2.75	34.63	1.33									
1861	2.24	34.66	1.79									
2245	1.90	34.69	2.28									

STRANGER; August 14, 1955; 0346, 0526 GCT; 25°34.5'N, 124°21'W; sounding, 2500 fm; wind, 045°, force 5; weather, overcast; sea, high; wire angle, 11°, 22°. 113

0	19.6	34.13	5.53	-	0	19.6	34.13	5.53		24.22	370.6	0.000
10	19.56	34.11	5.48	-	10	19.56	34.11	5.48		24.22	371.0	0.037
23	19.49	34.16	5.60	-	20	19.52	34.15	5.55		24.26	367.2	0.074
51	18.86	34.11	5.62	-	30	19.42	34.16	5.62		24.29	364.0	0.111
61	17.95	34.04	5.75	-	50	18.90	34.11	5.62		24.39	354.7	0.183
69	17.63	34.02	5.88	-	75	17.46	34.01	5.87	0.4	24.67	328.0	0.269
84	17.18	34.00	5.77	-	100	16.96	33.99	5.76	0.4	24.77	318.7	0.350
103	16.93	33.99	5.76	0.4	150	15.47	33.96	5.39	0.5	25.09	288.2	0.504
125	17.02	34.22	5.62	0.4	200	12.38	33.86	4.81	0.8	25.65	234.9	0.637
139p	16.28	34.08	5.47	0.5	250	9.57	33.87	4.37	1.5	26.16	185.9	0.745
151	15.35	33.95	5.35	0.5	300	8.08	33.92	3.75	1.9	26.44	160.5	0.834
248p	9.60	33.87	4.37	1.5	400	6.35	34.03	2.30	2.5	26.77	128.4	0.984
404p	6.26	34.04	2.22	2.5	500	5.98	34.25	0.87		27.00	107.5	1.108
					600	5.73	34.37	0.40		27.11	96.0	1.218
0	19.54u	34.09u	6.00u		700	5.25	34.41	0.36		27.20	87.8	1.316
9	19.58u	34.11u	5.63u		800	4.73	34.44	0.48		27.29	79.4	1.408
462	6.07	34.14	1.32		1000	4.31	34.47	0.60		27.37	72.4	1.578
623	5.67	34.38	0.36		1200	3.59	34.54	0.91		27.49	60.1	1.730
779	4.80	34.43	0.44		1500	2.90	34.59	1.41		27.60	50.0	1.925
964	4.42	34.29r	0.75r		2000	2.07	(34.61)			(27.68)	(42.6)	(2.205)
1148	3.73	34.53	0.84									
1404	3.11	34.58	1.21									
1660	2.54	34.61	1.64									
1942	2.12	34.61	2.01									
2329	1.89	34.23r	3.05r									

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

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STRANGER; August 15, 1955; 1931, 2111 GCT; 25°34'N, 127°21.5'W; sounding, 2300 fm; wind, 345°, force 5; weather, overcast; sea, rough; wire angle, 12°, 15°.

0	19.5	34.31	5.47	0.4	0	19.5	34.31	5.47	0.4	24.38	355.8	0.000
10	19.50	34.27	5.51	0.3	10	19.50	34.27	5.51	0.3	24.36	357.6	0.036
24	19.48	34.31	5.44	0.3	20	19.47	34.30	5.48	0.3	24.39	355.2	0.071
55	19.02	34.47	5.66	0.3	30	19.50	34.35	5.45	0.3	24.42	352.0	0.107
64	18.80	34.52	5.68	0.3	50	19.33	34.51	5.48	0.3	24.58	336.6	0.176
73	18.78	34.56	5.65	0.3	75	18.75	34.56	5.65	0.3	24.77	318.8	0.258
89	17.40	34.26	5.66	0.3	100	17.00	34.18	5.65	0.3	24.91	305.4	0.337
108	17.43	34.33	5.63	0.3	150	17.30	34.61	5.50	0.4	25.17	280.9	0.486
133	17.80	34.63	5.54	0.3u	200	13.30	34.02	5.15	0.7	25.60	240.0	0.619
162	16.92	34.57	5.47	0.3u	250	9.82	33.96	4.48	1.3	26.20	183.2	0.727
215	11.76	33.87	5.02	0.9	300	8.22	34.03	3.68	1.8	26.50	154.5	0.814
290	8.48	34.02	3.80	1.7	400	6.45	34.06	2.25	2.4	26.77	128.2	0.961
393	6.54	34.05	2.46	2.4	500	6.00	34.24	0.70	3.0	26.99	108.2	1.085
532	5.85	34.25	0.65	3.0	600	5.63	34.33	0.40	3.1	27.09	98.2	1.195
722	5.25	34.07r	1.87r	2.5r	700	5.33	34.40	0.37	3.2	27.19	89.3	1.297
					800	4.83	34.45	0.50	3.2	27.28	80.0	1.391
0	19.7u	34.31	5.56u	0.4u	1000	4.05	34.51	0.79	3.1	27.41	68.0	1.555
487	6.26u	34.22	0.91	2.9	1200	3.46	34.54	0.99	3.0	27.49	59.6	1.701
657	5.47	34.38	0.36	3.2	1500	2.84	34.59	1.45	3.0	27.60	49.8	1.894
815	4.76	34.03r	3.42r	2.0r	2000	2.05	34.64	2.15	2.9	27.70	40.0	2.166
1050	3.88	34.51	0.84	3.1	2500	1.73	34.63	2.48	2.8	27.73	37.5	2.407
1283	3.23	34 56	1.08	3.0	3000	1.55	34.66	2.91	2.7	27.75	35.4	2.639
1615	2.65	34.61	1.50	3.0	4000	(1.50)	(34.67)	(3.39)	(2.5)	(27.77)	(33.9)	(3.097)
1998	2.06	34.64	2.15	2.9								
2385	1.79	34.63	2.38	2.8								
2873	1.59	34.68u	2.82	2.7								
3365	1.48	34.67	3.19	2.6								
3859	1.50	34.67	3.33	2.5								
3958	1.50	34.67	3.39	2.5								

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STRANGER; August 17, 1955; 0835 GCT; 25°39.5'N, 130°22'W; sounding, 2470 fm; wind, 045°, force 5; weather, overcast; sea, very rough; wire angle, 12°.

0	19.75	34.47	5.40	0.4	0	19.75	34.47	5.40	0.4	24.44	349.5	0.000
9	19.73	34.47	5.50	0.3	10	19.74	34.47	5.50	0.3	24.44	349.7	0.035
24	19.74	34.45	5.34	0.3	20	19.74	34.46	5.35	0.3	24.44	350.3	0.070
53	18.37	34.58	5.73	0.2	30	19.73	34.45	5.35	0.3	24.43	351.3	0.105
68	18.40	34.70	6.59	0.2	50	18.55	34.54	5.64	0.2	24.80	315.9	0.172
83	18.11	34.68	5.57	0.2	75	18.30	34.70	6.30	0.2	24.99	297.8	0.249
107	17.69	34.81	5.47	0.2	100	17.82	34.80	5.48	0.2	25.17	279.8	0.322
130	17.44	34.63	5.40	0.3	150	17.18	34.59	5.36	0.3	25.18	279.2	0.464
158	17.01	34.58	5.35	-	200	13.26	34.03	4.85	1.0	25.61	239.0	0.596
277	9.16	34.00	4.39	1.5	250	9.98	33.93	4.48	1.4	26.14	187.7	0.705
375	7.38	34.08	2.41	2.3	300	8.57	34.02	4.17	1.7	26.44	159.8	0.795
499	6.37	34.27	0.71	3.0	400	7.10	34.12	1.85	2.5	26.73	132.0	0.947
666	5.36	34.40	0.31	3.2	500	6.37	34.27	0.68	3.0	26.95	110.7	1.075
890	4.31	34.49	0.63	3.2	600	5.76	34.36	0.36	3.2	27.10	97.4	1.187
1145	3.61	34.55	0.86	3.2	700	5.19	34.42	0.35	3.2	27.22	85.9	1.286
1455	2.97	34.04r	4.06r	1.6r	800	4.68	34.46	0.47	3.2	27.31	77.6	1.376
					1000	3.99	34.52	0.72	3.2	27.43	66.1	1.537
					1200	3.49						

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

STRANGER; August 18, 1955; 1929, 2055 GCT; 25°32'N, 133°23'W; sounding, 2450 fm; wind, 045°, force 4; weather, overcast; sea, rough; wire angle, 07°, 10°. 116

0	20.1	34.77	5.52	0.4	0	20.1	34.77	5.52	0.4	24.58	336.8	0.000
10	20.03	34.77	5.55	0.4	10	20.03	34.77	5.55	0.4	24.60	335.0	0.034
25	20.00	34.72	5.39	0.3	20	20.01	34.72	5.37	0.3	24.57	338.0	0.067
55	20.02	34.73	5.37	0.3	30	20.01	34.72	5.37	0.3	24.57	338.0	0.101
65	20.02	34.75	5.35	0.3	50	20.02	34.73	5.37	0.3	24.58	337.1	0.169
75	19.06	34.63	5.56	0.3	75	19.06	34.63	5.56	0.3	24.74	321.1	0.252
89	18.51	34.65	5.58	0.3	100	18.41	34.70	5.40	0.3	24.95	300.8	0.330
109	18.35	34.73	5.38	0.3	150	17.69	34.68	5.37	0.3	25.12	284.7	0.479
133	17.94	34.69	5.42	0.3	200	14.90	34.22	5.08	0.6	25.42	257.2	0.617
162	17.48	34.68	5.31	0.3	250	11.80	33.98	4.70	1.2	25.86	214.6	0.738
216	13.84	34.08	5.04	0.8a)	300	9.28	34.00	3.50	1.9	26.31	172.0	0.838
294	9.42	33.99	3.69	1.8	400	8.05	34.22	1.44	2.7	26.67	137.8	0.999
401	8.05	34.22	1.44	2.7	500	6.75	34.22	0.82	2.9	26.86	119.8	1.135
543	6.16	34.23	0.64	3.1	600	5.83	34.27	0.49	3.2	27.03	104.2	1.254
					700	5.32	34.36	0.36	3.2	27.16	92.0	1.360
0	20.03u	34.73u	5.41u	-	800	4.82	34.42	0.47	3.3	27.26	82.0	1.456
10	20.06u	34.71u	5.45u	-	1000	4.11	34.49	0.69	3.3	27.39	69.9	1.626
490	6.89	34.22	0.88	2.9	1200	3.58	34.55	0.92	3.2	27.49	59.8	1.776
661	5.51	34.34	0.36	3.2	1500	2.97	34.58	1.25	3.2	27.58	51.9	1.975
823	4.71	34.43	0.49	3.3	2000	2.14	34.62	1.86	3.0	27.68	42.2	2.262
1015	4.07	34.49	0.72	3.3								
1208	3.57	34.56	0.94	3.2								
1474	3.02	34.58	1.20	3.2								
1741	2.46	24.63	1.65	3.1								
2036	2.11	34.62	1.90	3.0								
2433	1.83	34.65	2.31	2.8								

STRANGER; August 10-11, 1955; 2247, 2258, 0045 GCT; 27°42'N, 115°35'W; sounding, 1500 fm; wind, 350°, force 4; weather, cloudy; sea, moderate; wire angle, 07°, 07°, 06°. 117

0	21.33	33.60	6.84	0.6	0	21.33	33.60	6.84	0.6	23.36	453.0	0.000
10	20.68	33.64	5.98	0.5	10	20.68	33.64	5.98	0.5	23.57	433.2	0.044
25	18.36	33.57	6.29	0.7b)	20	19.55	33.61	6.15	0.6	23.84	407.0	0.086
55	12.12	33.49	5.40	1.1	30	17.10	33.54	6.22	0.8	24.40	354.3	0.125
64	11.11	33.57	4.16	1.6	50	13.00	33.49	5.58	1.0	25.25	273.0	0.188
74	10.82	33.68	3.58	1.9	75	10.80	33.69	3.55	1.9	25.82	219.4	0.250
88	10.07	33.82	3.30	2.1	100	10.07	33.96	2.60	2.2	26.15	186.8	0.301
107	10.06	34.00	2.39	2.3	150	9.90	34.14	2.20	2.2	26.32	171.4	0.392
132	9.78	34.06	2.58	2.1	200	9.79	34.40	0.96	2.7	26.54	150.2	0.474
161	10.02	34.23	1.62	2.4	250	9.48	34.45	0.65	2.8	26.64	141.2	0.559
					300	9.11	34.47	0.42	2.9	26.71	134.1	0.621
216	9.71	34.41	0.85	2.7	400	8.14	34.44	0.27	3.1	26.84	122.1	0.756
294	9.16	34.47	0.42	2.9	500	7.42	34.44	0.39	3.2	26.94	112.2	0.881
401	8.13	34.44	0.27	3.1	600	6.30	34.43	0.29	3.3	27.08	98.6	0.995
545	6.82	34.42	0.29	3.2	700	5.75	34.43	0.30	3.4	27.15	92.0	1.099
738	5.47	34.42	0.34	3.4	800	5.10	34.43	0.36	3.4	27.23	84.5	1.196
					1000	4.08	34.52	0.55	3.4	27.41	67.5	1.366
0	21.34u	33.66u	5.47u	0.5u	1200	3.48	34.56	0.83	3.3	27.51	58.3	1.511
21	21.38u	33.67u	5.57u	0.5u	1500	2.92	34.57	1.40	3.3	27.58	51.6	1.705
489	7.52	34.44	0.39	3.2	2000	2.23	(34.65)	1.80	3.1	(27.70)	(40.0)	(1.985)
662	5.96	34.43	0.29	3.3								
827	4.96	34.43	0.38	3.4								
1020	4.00	34.52	0.58	3.4								
1217	3.44	34.56	0.84	3.4								
1488	2.95	34.57	1.33	3.3								
1760	2.38	34.62	1.78	3.2								
2059	2.19	34.68u	1.83	3.1								
2462	1.85	34.67u	2.46	2.9								

a) Mean value of 0.7 and 0.9 μg at/L.
b) Mean value of 0.5 and 1.0 μg at/L.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

118 STRANGER; August 11, 1955; 0852, 0913, 0935, 1011 GCT; 27°13.5'N, 116°30.5'W; sounding, 2100 fm; wind, 330°, force 4; weather, partly cloudy; sea, slight; wire angle, 12°, 15°, 11°, 14°.

0	20.16	33.64	5.47	0.5	0	20.16	33.64	5.47	0.5	23.71	419.9	0.000
10	19.36	33.64	5.58	0.5	10	19.36	33.64	5.58	0.5	23.92	400.2	0.041
					20	18.08	33.54	5.84	0.5	24.17	376.3	0.080
25	17.20	33.49	6.00	0.5	30	16.42	33.47	6.00	0.5	24.48	346.0	0.116
54	12.78	33.39	5.92	0.8	50	13.33	33.40	5.93	0.7	25.12	285.5	0.179
69	11.79	33.53	4.47	1.4	75	11.50	33.61	3.86	1.6	25.63	236.8	0.245
83	11.12	33.73	3.32	2.0	100	10.37	33.87	2.86	2.1	26.03	199.0	0.300
108	10.06	33.92	2.72	2.0	150	9.55	34.19	2.13	2.3	26.41	162.8	0.392
					200	9.09	34.26	1.56	2.4	26.54	149.9	0.472
133	9.66	34.11	2.33	2.3	250	9.10	34.43	0.70	2.7	26.67	137.6	0.546
164	9.46	34.22	1.92	2.6u	300	9.10	34.56	0.26	2.8	26.78	127.5	0.615
216	8.94	34.27	1.37	2.4	400	7.69	34.44	0.32	3.0	26.90	116.1	0.743
282	9.25	34.57	0.26	2.8	500	6.93	34.42	0.36	3.2	27.00	107.5	0.862
382	7.91	34.45	-	3.0	600	5.35	(34.45)	0.39	(3.3)	(27.10)	(97.3)	(0.972)
508	6.87	34.42	0.37	3.2	700	5.80	(34.50)	0.45	(3.4)	(27.21)	(87.2)	(1.074)
677	5.94	34.53u	0.41	3.0u	800	5.24	(34.51)	0.58	(3.4)	(27.28)	(80.3)	(1.167)
					1000	4.26	34.53	0.75	3.4	27.41	67.9	(1.334)
927	4.54	34.52	0.73	3.4	1200	3.64	34.57	0.77	3.3	27.50	58.8	(1.481)
1180	3.68	34.56	0.73	3.3								
1489	2.97	34.61	1.19	3.3a)								

119 STRANGER; August 11, 1955; 2102, 2329 GCT; 26°31'N, 117°54.5'W; sounding, 2100[b] fm; wind, 315°, force 4; weather, overcast; sea, rough; wire angle, 04°, 02°.

0	21.65	33.76	5.40	0.5	0	21.65	33.76	5.40	0.5	23.39	449.8	0.000
8	20.82	33.74	5.48	0.4	10	20.57	33.73	5.49	0.5	23.66	424.0	0.044
16	19.13	33.69	5.63	0.5	20	18.89	33.69	5.61	0.5	24.06	385.6	0.084
41	17.79	33.68	5.44	0.4	30	18.39	33.68	5.53	0.4	24.19	274.2	0.122
49	16.83	33.63	5.80	0.5	50	16.60	33.61	5.90	0.5	24.57	338.0	0.194
56	15.62	-	6.19	0.4	75	12.60	33.40	5.98	0.7	25.25	272.9	0.271
67	13.88	33.40	6.35	0.5	100	10.77	33.41	4.67	1.3	25.61	239.0	0.335
82	11.87	33.40	5.83	0.8	150	10.08	34.01	2.51	2.2	26.20	183.4	0.442
102	10.71	33.42	4.64	1.3	200	9.20	(34.09)	2.38	2.3	(26.40)	(164.0)	(0.531)
124	10.30	33.65	3.52	1.7	250	8.20	(34.11)	2.28	2.3	(26.58)	(147.0)	(0.611)
167	9.94	34.05	2.33	2.3	300	7.65	(34.13)	1.21	2.7	(26.66)	(138.9)	(0.685)
230	8.45	33.51r	2.44	2.3	400	6.90	34.23	0.45	3.0	26.85	120.9	(0.820)
319	7.59	34.14	1.11	2.7	500	6.59	34.41	0.61	3.2	27.03	104.0	(0.939)
435	6.71	34.27	0.44	3.1	600	5.55	34.35	0.62	3.2	27.12	95.2	(1.046)
593	5.60	34.35	0.62	3.2	700	5.15	34.44	0.62	3.2	27.24	84.0	(1.443)
					800	4.86	34.49	0.68	3.3	27.31	77.2	(1.232)
492	6.60	34.41	0.60	3.2	1000	4.17	(34.54)	0.77	3.3	(27.43)	(66.1)	(1.395)
669	5.24	34.41	0.61	3.1	1200	3.52	(34.56)	0.99	3.2	(27.50)	(58.8)	(1.538)
832	4.77	34.51	0.71	3.3	1500	2.83	(34.59)	1.42	3.1	(27.59)	(50.7)	(1.731)
1077	3.90	34.68r	0.80	3.2	2000	2.12	34.65	2.18	3.0	27.70	39.9	(2.005)
1320	3.17	34.51r	1.21	3.1	2500	1.79	34.67	2.52	2.8	27.75	35.9	(2.242)
1684	2.52	34.61	1.67	3.0	3000	1.61		2.95	2.7			
2060	2.06	34.65	2.27	3.0								
2458	1.81	34.67	2.44	2.9								
2954	1.62	34.67	2.82	2.7								
3349	1.58	34.79r	3.48	2.6								

a) Alternate value, 2.9 μg at/L, not used in interpolation.
b) Sounding varies from 1900 to 2100 fathoms.

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

STRANGER; August 12, 1955; 1141, 1200, 1237 GCT; 25°52.5'N, 119°06'W; sounding, 2200 fm; wind, 315°, force 4; weather, overcast; sea, moderate; wire angle, 08°, 08°, 25°. 120

0	20.8	33.81	5.40	0.5	0	20.8	33.81	5.40	0.5	23.66	423.9	0.000	
10	20.78	33.80	5.23	0.4	10	20.78	33.80	5.23	0.4	23.66	423.9	0.042	
					20	19.30	33.86	5.45	0.5	24.09	382.7	0.083	
25	18.98	33.86	5.56	0.4	30	18.80	33.86	5.60	0.5	24.23	370.2	0.121	
55	18.16	33.84	5.74	0.4	50	18.32	33.85	5.71	0.4	24.34	359.8	0.194	
69	16.34	33.64	5.93	0.4	75	16.18	33.65	5.96	0.4	24.69	325.8	0.280	
83	15.96	33.65	5.98	0.4	100	14.70	33.51	5.90	0.4	24.91	304.9	0.360	
107	14.23	33.49	5.86	0.4	150	11.21	33.50	4.71	1.2	25.58	241.4	0.498	
130	12.85	33.49	5.32	0.8	200	9.95	33.81	2.95	1.9	26.06	196.1	0.609	
155	10.94	33.50	4.54	1.3	250	9.09	34.08	2.58	2.2	26.41	163.0	0.701	
206	9.82	33.89	2.89	2.0	300	8.32	34.19	2.18	2.4	26.61	144.0	0.780	
269	8.74	34.14	2.49	2.2	400	7.20	34.28	0.90	2.9	26.85	121.0	0.919	
365	7.59	34.26	1.15	2.8	500	6.30	34.32	0.52	3.2	27.00	107.0	1.039	
483	6.42	34.31	0.55	3.1	600	5.58	34.36	0.36	3.2	27.12	95.0	1.147	
644	5.33	34.38	0.33	3.2	700	5.05	34.40	0.33	3.2	27.22	86.2	1.246	
865p	4.40	34.49	0.54	3.3	800	4.63	34.45	0.40	3.2	27.30	77.8	1.336	
465p	6.60	34.31	0.63	3.0									
753p	4.82	34.43	0.33	3.2									

STRANGER; August 13, 1955; 0138, 0248 GCT; 25°02'N, 120°45'W; sounding, 2200 fm; wind, 330°, force 4; weather, overcast; sea, rough; wire angle, 08°, 02°. 121

0	21.1	33.83	5.45	0.5	0	21.1	33.83	5.45	0.5	23.61	429.0	0.000	
10	20.6	33.82	5.57	0.5	10	20.6	33.82	5.57	0.5	23.73	418.0	0.042	
25	19.90	33.81	5.60	0.4	20	20.17	33.82	5.60	0.5	23.83	407.2	0.084	
54	18.76	33.73	5.72	0.5	30	19.71	33.80	5.61	0.4	23.95	396.5	0.124	
64	17.85	33.63	5.80	0.4	50	18.97	33.75	5.70	0.5	24.09	382.7	0.202	
74	17.00	33.58	5.99	0.4	75	16.92	33.58	6.00	0.4	24.46	347.6	0.294	
89	15.76	33.52	6.08	0.4	100	14.72	33.46	5.91	0.5	24.87	309.3	0.377	
108	13.80	33.42	5.68	0.6	150	10.40	33.65	3.98	1.6	25.86	215.4	0.510	
131	11.34	33.44	4.53	1.3	200	9.64	34.00	2.79	2.2	26.25	177.5	0.610	
161	10.11	33.75	3.73	1.7	250	9.10	34.22	1.75	2.5	26.52	152.4	0.695	
213	9.52	34.09	2.36	2.3	300	8.43	34.32	1.16	2.7	26.72	132.6	0.769	
291	8.56	34.30	1.22	2.7	400	7.38	34.36	0.50	3.0	26.89	117.4	0.902	
400	7.38	34.36	0.50	3.0	500	6.52	34.38	0.33	3.1	27.02	105.3	1.020	
543	6.13	34.37	0.29	3.2	600	5.70	34.39	0.30	3.3	27.13	93.9	1.127	
738	4.98	34.43	0.36	3.2	700	5.13	34.42	0.34	3.3	27.22	85.6	1.225	
					800	4.70	34.44	0.45	3.3	27.29	79.3	1.316	
0	20.52u	33.82u	5.44u	0.5	1000	4.07	34.51	0.58	3.2	27.42	67.2	1.481	
10	20.59u	33.81u	5.43u	0.5	1200	3.48	34.56	0.83	3.2	27.50	58.5	1.626	
498	6.60u	34.40u	0.38u	3.1u	1500	2.88	34.59	1.42	3.1	27.60	49.9	1.819	
672	5.26	34.42	0.32	3.3	2000	2.11	(34.64)	(1.92)	(2.9)	(27.70)	(40.4)	(2.096)	
837	4.56	34.51u	0.50	3.3									
1032	3.98	34.52	0.59	3.2									
1227	3.41	34.57	0.91	3.2									
1497	2.88	34.59	1.46	3.1									
1768	2.40	34.62	1.71	3.0									
2064	2.05	34.68u	2.20u	2.9u									
2465	1.85	34.63u	2.09u	2.9u									

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

122 **SPENCER F. BAIRD; August 14, 1955; 1755 GCT; 23°31.5'N, 123°08'W; sounding, 2000 fm; wind, 010°, force 3; weather, overcast; sea, rough; wire angle, 23°.**

0	20.44	33.78	5.25	0.5	0	20.44	33.78	5.25	0.5	23.73	417.2	0.000
9	20.44	33.78	5.28	0.5	10	20.44	33.78	5.28	0.5	23.74	416.7	0.042
23	19.33	33.79	5.40	0.5	20	20.09	33.79	5.35	0.5	23.83	408.0	0.083
51	16.56	33.57	5.89	0.5	30	18.30	33.71	5.63	0.5	24.23	370.1	0.122
64	15.99	33.54	5.82	0.5	50	16.63	33.58	5.88	0.5	24.53	341.3	0.193
78	15.54	33.54	5.82	0.5	75	15.62	33.54	5.82	0.5	24.73	322.1	0.277
102	14.24	33.45	5.68	0.6	100	14.38	33.46	5.71	0.6	24.94	302.3	0.355
124	13.02	33.48	5.27	0.9	150	10.91	33.53	4.35	1.5	25.67	232.5	0.491
151	10.82	33.53	4.34	1.5	200	10.06	34.00	2.60	1.7	26.18	184.3	0.597
200	10.06	34.00	2.60	1.7a)	250	9.05	34.17	2.39	2.0	26.48	155.7	0.684
261	8.87	34.19	2.31	2.1	300	8.52	34.25	1.95	2.3	26.63	142.0	0.761
355	8.08	34.34	0.86	2.6b)	400	7.55	34.38	0.59	2.9	26.88	118.2	0.898
470	6.78	34.40	0.43	3.2	500	6.53	34.40	0.38	3.2	27.03	103.4	1.016
626	5.68	34.42	0.29	3.3	600	5.86	34.42	0.29	3.3	27.14	93.9	1.122
837	4.64	34.52	0.51	3.4	700	5.29	34.44	0.34	3.4	27.23	84.4	1.219
1068	3.78	34.59	0.79	3.3	800	4.80	34.50	0.48	3.4	27.33	75.3	1.308
1371	3.14	34.61	1.09	3.3	1000	3.98	34.58	0.70	3.3	27.48	61.4	1.463
					1200	3.48	34.60	0.90	3.3	27.54	55.4	1.599

123 **SPENCER F. BAIRD; August 16, 1955; 0457, 0628 GCT; 23°42.9'N, 126°14'W; sounding, 2000 fm; wind, 040°, force 4; weather, intermittent drizzle; sea, moderate; wire angle, 14°, 10°.**

0	20.12	34.06	5.27	0.6	0	20.12	34.06	5.27	0.6	24.04	388.5	0.000
10	20.12	34.09	5.27	0.5	10	20.12	34.09	5.27	0.5	24.06	386.2	0.039
24	20.10	34.07	5.28	0.5	20	20.10	34.07	5.28	0.5	24.05	386.8	0.078
53	19.10	34.04	5.46	0.5	30	20.10	34.06	5.28	0.5	24.05	386.8	0.116
62	18.30	33.96	5.59	0.5	50	19.27	34.05	5.43	0.5	24.25	368.4	0.192
72	17.88	33.98	5.64	0.5	75	17.82	33.99	5.63	0.5	24.56	338.2	0.281
86	17.60	34.00	5.61	0.4	100	17.22	34.01	5.56	0.5	24.73	322.7	0.364
104	17.04	34.01	5.53	0.5	150	13.04	33.70	5.00	1.0	25.40	258.5	0.512
128	15.52	33.95	5.26	0.6	200	10.12	33.84	3.78	1.7	26.05	197.2	0.628
154	12.70	33.68	4.95	1.0	250	8.75	34.01	3.35	2.1	26.41	162.9	0.720
205	9.94	33.86	3.73	1.8	300	7.90	34.11	2.79	2.4	26.61	143.3	0.799
278	8.23	34.07	3.11	2.2	400	6.78	34.20	1.23	3.0	26.84	121.5	0.937
377	6.94	34.18	1.47	2.9u	500	6.24	34.34	0.45	3.3	27.02	105.2	1.056
515	6.29u	34.36u	0.40u	3.3	600	5.78	34.45	0.35	3.4	27.17	90.8	1.161
702	5.24	34.48	0.41	3.4	700	5.25	34.48	0.43	3.4	27.26	82.3	1.256
					800	4.85	34.51	0.48	3.4	27.33	75.6	1.343
0	20.10u	34.06	5.28u	0.6	1000	4.20	34.51	0.65	3.4	27.40	68.7	1.506
10	20.12	34.09	5.28u	0.6u	1200	3.57	34.56	1.15	3.4	27.50	59.1	1.653
488	6.23u	34.31u	0.52u	3.2u	1500	2.88	34.58	1.27	3.3	27.59	51.0	1.847
660	5.47	34.47	0.33	3.4	2000	2.16	34.64	2.10	3.0	27.70	40.3	2.125
824	4.76	34.51	0.49	3.4								
1019	4.14	34.51	0.69	3.3u								
1208	3.53	34.56	1.14	3.4								
1471	2.94	34.58	1.25	3.3								
1735	2.48	34.61	1.64	3.1								
2021	2.13	34.64	2.05	3.0								
2414	1.86	34.68	2.44	3.0u								

a) Alternate value, 1.5 μg at/L, not used in interpolation.
b) Alternate value, 2.9 μg at/L, not used in interpolation.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

SPENCER F. BAIRD; August 17, 1955; 1827 GCT; 23°31'N, 129°19'W; sounding, 2000 fm; wind, 030°, force 3; weather, overcast; sea, moderate; wire angle, 16°. 124

0	20.11	34.35	5.28	0.4	0	20.11	34.35	5.28	0.4	24.26	367.2	0.000
9	20.10	34.34	5.28	0.4	10	20.12	34.34	5.29	0.4	24.25	367.9	0.037
23	20.10	34.33	5.29	0.4	20	20.11	34.33	5.29	0.4	24.25	368.2	0.074
52	20.09	34.56	5.26	0.4	30	20.10	34.39	5.29	0.4	24.29	364.0	0.110
65	19.37	34.47	5.38	0.4	50	20.09	34.54	5.27	0.4	24.40	353.4	0.182
80	19.21	34.54	5.38	0.4	75	19.30	34.52	5.38	0.4	24.60	334.8	0.269
102	18.22	34.43	5.42	0.4	100	18.33	34.44	5.42	0.4	24.78	317.2	0.351
125	16.62	34.42	5.13	0.5	150	13.85	33.88	4.91	0.8	25.37	261.4	0.498
154	13.32	33.79	4.85	0.9	200	10.60	33.85	3.97	1.6	25.97	204.2	0.616
204	10.42	33.86	3.91	1.7	250	9.17	34.00	3.45	2.1	26.33	170.0	0.712
269	8.78	34.07	3.26	2.2	300	8.20	34.11	2.83	2.4	26.57	147.3	0.794
367	7.16	34.15	1.82	2.8a)	400	6.80	34.20	1.45	3.0	26.84	122.0	0.935
487	6.14	34.31	0.67	3.3	500	6.07	34.31	0.62	3.3	27.02	104.3	1.054
650	5.30	34.42	0.57	3.4	600	5.55	34.32	0.60	3.4	27.09	97.9	1.163
869	4.46	34.52	0.46	3.4	700	5.10	34.35	0.52	3.4	27.17	91.8	1.265
1122	3.71	34.56	0.90	3.5	800	4.71	34.46	0.49	3.4	27.31	77.4	1.358
1427	2.96	34.60	1.23	3.6	1000	4.06	34.55	0.65	3.4	27.44	64.6	1.517
					1200	3.52	34.57	1.00	3.5	27.52	57.5	1.658

SPENCER F. BAIRD; August 18, 1955; 1019, 1200 GCT; 23°40'N, 132°15'W; sounding, 2580 fm; wind, 050°, force 3; weather, missing; sea, moderate; wire angle, 13°, 15°. 125

0	20.00	34.66	5.32	0.4	0	20.00	34.66	5.32	0.4	24.52	342.3	0.000
6	19.98	34.68	5.25	0.4	10	19.99	34.68	5.27	0.4	24.54	340.2	0.034
24	19.99	34.68	5.35	0.4	20	19.99	34.68	5.33	0.4	24.54	340.2	0.068
53	19.24	34.66	5.46	0.4	30	19.99	34.68	5.37	0.4	24.54	340.2	0.102
63	18.81	34.62	5.48	0.4	50	19.63	34.67	5.43	0.4	24.63	332.1	0.170
72	18.60	34.68	5.46	0.4	75	18.55	34.68	5.47	0.4	24.91	304.8	0.250
88	18.32	34.68	5.42	0.4	100	17.83	34.60	5.30	0.3	25.02	294.6	0.326
106	17.60	34.56	5.25	0.3	150	14.83	34.17	4.98	0.7	25.39	259.9	0.466
132	16.74	34.48	5.12	0.5	200	11.35	33.95	4.74	1.2	25.91	209.8	0.586
160	13.92	34.06	4.92	0.8	250	9.88	33.97	4.52	1.6	26.18	184.0	0.686
210	10.89	33.94	4.69	1.3	300	8.58	34.06	3.93	2.0	26.47	156.9	0.774
284	9.01	34.04	4.25	1.8	400	6.60	34.11	1.90	3.0	26.80	126.0	0.921
385	6.69	34.09	2.14	2.9r	500	6.16	34.29	0.56	3.2	27.00	107.0	1.044
520	5.98	34.31	0.43	3.5r	600	5.49	34.33	0.40	3.3	27.12	95.8	1.152
707	4.89	34.42	0.41	3.7r	700	4.93	34.41	0.40	3.3	27.24	83.9	1.250
					800	4.59	34.45	0.52	3.3	27.31	77.5	1.339
0	19.96u	34.68u	5.27u	0.4	1000	3.95	34.51	0.85	3.3	27.42	66.4	1.501
11	19.98u	34.68u	5.32u	0.4	1200	3.42	34.57	1.05	3.3	27.52	57.1	1.642
469	6.33	34.24	0.84	3.1	1500	2.82	34.62	1.40	3.2	27.63	47.4	1.828
639	5.26	34.36	0.40	3.3	2000	2.09	34.64	2.00	3.0	27.70	40.1	2.097
795	4.61	34.45	0.50	3.3								
983	3.99	34.60u	0.84	3.3								
1176	3.48	34.56	1.02	3.3								
1438	2.93	34.61	1.26	3.2								
1703	2.46	34.63	1.68	3.1								
1996	2.10	34.64	1.99	3.0								
2396	1.80	34.67	2.42	2.9								

a) Alternate value, 2.50 μg at/L, not used in interpolation.

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SPENCER F. BAIRD; August 20, 1955; 2245 GCT; 23°43'N, 135°11'W; sounding, 2700 fm; wind, 040°, force 3; weather, drizzle; sea, moderate; wire angle, 15°.

OBSERVED					INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0	21.48	34.79	5.13	0.4	0	21.48	34.79	5.13	0.4	24.22	370.9	0.000
10	21.29	34.78	5.06	0.4	10	21.29	34.78	5.06	0.4	24.27	366.6	0.037
24	21.26	34.78	5.17	0.4	20	21.26	34.78	5.18	0.4	24.27	365.8	0.074
53	20.11	34.72	5.30	0.4	30	21.24	34.78	5.32	0.4	24.28	364.9	0.110
66	19.85	34.80	5.41	0.4	50	21.09	34.77	5.30	0.4	24.32	361.9	0.183
80	19.38	34.80	5.33	0.4	75	19.59	34.80	5.38	0.4	24.74	321.5	0.269
103	18.63	34.79	5.20	0.4	100	18.70	34.79	5.21	0.4	24.96	300.7	0.348
125	18.08	34.76	5.08	0.4	150	17.25	34.66	4.99	0.5	25.21	276.2	0.494
152	17.15	34.64	4.99	0.5	200	13.02	34.10	4.16	1.2	25.71	229.1	0.623
200	13.02	34.10	4.16	1.2	250	10.14	33.99	4.30	1.6	26.16	186.0	0.729
264	9.58	33.99	4.29	1.7	300	8.64	34.01	3.81	2.0	26.42	161.8	0.819
360	7.54	34.07	2.74	2.5	400	6.98	34.11	2.27	2.8	26.75	130.7	0.971
477	6.18	34.19	1.10	3.2	500	6.00	34.21	0.74	3.3	26.95	111.0	1.099
637	5.22	34.36	0.46	3.6u	600	5.40	34.32	0.46	3.5	27.11	96.2	1.209
851	4.32	34.49	0.71	3.5u	700	4.93	34.42	0.55	3.6	27.26	82.2	1.306
1096	3.68	34.53	0.93	3.5	800	4.51	34.48	0.67	3.6	27.34	74.1	1.392
1395	3.02	34.58	1.27	3.1	1000	3.92	34.52	0.86	3.5	27.44	65.1	1.548
					1200	3.44	34.54	1.03	3.4	27.51	58.8	1.691

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SPENCER F. BAIRD; August 21, 1955; 1650, 1820 GCT; 23°39.5'N, 138°16'W; sounding, 2000 fm; wind, 045°, force 3; weather, cloudy; sea, slight; wire angle, 20°, 12°.

0	22.12	34.83	5.16	0.4	0	22.12	34.83	5.16	0.4	24.08	384.2	0.000
9	22.08	34.82	5.12	0.5	10	22.09	34.82	5.12	0.5	24.08	384.0	0.038
23	22.03	34.79	5.10	0.5	20	22.04	34.80	5.10	0.5	24.07	385.0	0.077
51	20.99	34.82	5.35	0.4	30	22.00	34.79	5.08	0.5	24.08	384.2	0.116
61	20.58	34.89	5.42	0.4	50	21.40	34.80	5.22	0.4	24.24	369.1	0.191
70	20.23	34.92	5.34	0.4	75	20.00	34.92	5.35	0.4	24.72	323.8	0.278
84	19.57	34.88	5.30	0.4	100	18.92	34.77	4.90	0.5	24.88	307.9	0.358
103	18.83	34.76	4.90	0.5	150	18.18	34.78	5.05	0.5	25.08	289.1	0.509
130	18.43	34.79	5.12	0.4	200	16.39	34.58	4.90	0.6	25.35	263.7	0.650
152	18.15	34.78	5.04	0.5	250	12.45	34.05	4.80	1.1	25.78	222.9	0.774
199	16.42	34.58	4.90	0.6	300	10.05	34.03	4.36	1.4	26.20	182.2	0.878
270	11.35	33.97	4.69	1.2	400	7.79	34.05	3.49	2.2	26.58	146.1	1.049
366	8.22	34.05	3.72	2.0	500	6.25	34.13	1.50	2.9	26.86	120.0	1.189
498	6.26	34.13	1.52	2.9	600	5.35	34.29	0.70	3.1	27.10	97.1	1.305
683	4.99	34.33	0.45	3.3	700	4.93	34.33	0.46	3.3	27.18	89.2	1.405
					800	4.55	34.41	0.64	3.3	27.28	79.7	1.498
0	22.12	34.82u	5.08u	0.4	1000	4.00	34.49	0.85	3.3	27.41	68.0	1.663
9	22.10u	34.81u	5.17u	0.4u	1200	3.44	34.52	0.99	3.3	27.48	61.1	1.812
482	6.56	34.08	1.90	2.6	1500	2.79	34.60	1.38	3.3	27.61	48.8	2.005
651	5.10	34.31	0.50	3.2	2000	2.10	34.63	2.01		27.69	41.2	2.276
809	4.52	34.43	0.63	3.4u								
998	4.00	34.52u	0.85	3.3								
1186	3.48	34.52	0.99	3.3								
1448	2.89	34.59	1.32	3.3								
1710	2.46	34.67u	1.67	3.2								
2007	2.09	34.63	2.06	3.2u								
2339p	2.18r	34.64	1.97	3.2u								

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

SPENCER F. BAIRD; August 22, 1955; 1444 GCT; 23°40'N, 141°06'W; sounding, 2800 fm; wind, 025°, force 4; weather, drizzle; sea, moderate; wire angle, 20°. 128

0	22.10	34.97	4.95	0.4	0	22.10	34.97	4.95	0.4	24.19	374.0	0.000
9	22.12	35.01	5.09	0.4	10	22.10	35.01	5.03	0.4	24.22	371.2	0.037
23	22.13	35.03	4.90	0.4	20	22.11	35.03	4.92	0.4	24.23	370.1	0.074
51	21.74	35.01	4.96	0.4	30	21.92	35.02	4.91	0.4	24.28	365.3	0.111
64	20.84	35.28	5.12	0.3	50	21.75	35.01	4.96	0.4	24.32	361.3	0.184
78	20.50	35.32	5.14	0.3	75	20.55	35.32	5.14	0.3	24.88	308.0	0.269
100	19.87	35.23	5.03	0.3	100	19.87	35.23	5.03	0.3	24.99	297.9	0.345
122	19.12	35.16	5.05	0.3	150	18.71	35.10	4.96	0.4	25.19	279.0	0.491
148	18.76	35.10	4.98	0.4	200	16.41	34.63	4.78	0.5	25.38	260.4	0.629
195	16.81	34.69	4.79	0.5	250	12.41	34.17	4.69	1.0	25.88	213.0	0.750
256	12.18	34.14	4.69	1.0	300	10.50	34.08	4.53	1.4	26.17	185.2	0.853
348	9.43	34.07	4.31	1.7	400	8.20	34.05	3.73	2.1	26.52	151.8	1.028
460	6.67	34.04	2.57	2.6	500	6.12	34.10	1.90	2.9	26.86	120.2	1.171
615	5.23	34.23	0.63	3.4	600	5.33	34.22	0.66	3.4	27.05	102.3	1.290
821	4.34	34.43	0.61	3.5	700	4.80	34.32	0.61	3.5	27.19	89.1	1.393
1060	3.77	34.52	1.01	3.5	800	4.42	34.40	0.61	3.5	27.29	79.6	1.485
1355	3.10	34.57	1.25	3.5	1000	3.91	34.50	0.90	3.5	27.42	66.9	1.648
					1200	3.45	34.55	1.12	3.5	27.50	59.1	1.793

SPENCER F. BAIRD; August 23, 1955; 0829, 1010 GCT; 23°42'N, 143°57.5'W; sounding, 2000 fm; wind, 060°, force 4; weather, drizzle; sea, moderate; wire angle, 26°, 20°. 129

0	22.23	35.03	5.23	0.4	0	22.23	35.03	5.23	0.4	24.20	373.0	0.000
9	22.20	35.04	5.06	0.4	10	22.19	35.04	5.10	0.4	24.22	371.3	0.037
22	22.09	35.16	5.15	0.3	20	22.10	35.13	5.13	0.3	24.31	362.0	0.074
49	21.92	35.19	5.11	0.4	30	22.02	35.18	5.10	0.3	24.37	356.2	0.110
58	21.93	35.16	5.03	0.4	50	21.91	35.19	5.12	0.4	24.40	353.4	0.181
67	21.66	35.20	5.29	0.4	75	21.10	35.21	5.23	0.3	24.64	331.0	0.267
80	20.90	35.21	5.21	0.3	100	20.42	35.21	5.27	0.3	24.83	313.0	0.349
99	20.44	35.21	5.26	0.3	150	19.23	35.14	5.07	0.4	25.09	288.6	0.501
120	19.92	35.18	5.29	0.4	200	17.60	34.85	4.98	0.4	25.28	270.0	0.644
143	19.40	35.16	5.10	0.4	250	14.50	34.39	4.73	0.7	25.63	237.1	0.774
185	18.50	35.01	5.01	0.4	300	12.14	34.13	4.75	1.1	25.90	210.9	0.889
246	14.74	34.42	4.76	0.7	400	9.02	34.03	4.00	1.9	26.37	166.0	1.085
339	10.74	34.04	4.73	1.4	500	6.83	34.10	2.19	2.7	26.75	130.0	1.240
455	7.62	34.05	3.02	2.4	600	5.75	34.18	0.87	3.1	26.97	109.2	1.367
640	5.39	34.23	0.71	3.2u	700	5.04	34.31	0.64	3.3	27.15	92.6	1.476
					800	4.62	34.39	0.60	3.3	27.25	82.4	1.571
0	22.40u	34.92u	5.09u	0.4	1000	4.01	34.48	0.93	3.3	27.40	69.1	1.740
9	22.42u	34.92u	5.08u	0.4	1200	3.49	34.53	1.15	3.3	27.49	60.1	1.889
456	7.60	34.05	2.97	2.4	1500	2.88	34.59	1.45	3.3	27.59	50.8	2.085
627	5.49	34.22	0.73	3.2u	2000	2.10	34.60	2.07	3.3	27.67	43.2	2.368
785	4.68	34.38	0.57	3.3								
968	4.11	34.47	0.87	3.3								
1150	3.61	34.52	1.09	3.3								
1403	3.07	34.58	1.35	3.3								
1656	2.57	34.61	1.63	3.3								
1935	2.17	34.60	1.92	3.3								
2313	1.82	34.63	2.34	3.1								

130 **SPENCER F. BAIRD; August 24, 1955; 0748 GCT; 23°48'N, 146°56'W; sounding, 2000 fm; wind, 060°, force 5; weather, partly cloudy; sea, rough; wire angle, 25°.**

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	22.54	35.17	5.07	0.3	0	22.54	35.17	5.07	0.3	24.21	372.1	0.000
9	22.54	35.16	5.09	0.3	10	22.54	35.17	5.08	0.3	24.21	372.1	0.037
22	22.56	35.16	5.15	0.1	20	22.55	35.16	5.11	0.2	24.21	372.1	0.074
51	22.46	35.26	5.10	0.3	30	22.54	35.16	5.11	0.1	24.21	372.1	0.112
64	21.48	35.08	5.25	0.4	50	22.47	35.25	5.10	0.3	24.30	363.3	0.186
78	21.54	35.34	5.32	0.2	75	21.51	35.30	5.31	0.3	24.61	334.2	0.273
99	20.90	35.33	5.05	0.3	100	20.86	35.33	5.03	0.3	24.80	315.4	0.356
122	20.24	35.26	4.98	0.3	150	19.53	35.20	4.93	0.4	25.07	290.2	0.509
148	19.59	35.21	4.93	0.4	200	18.00	34.98	4.96	0.4	25.28	270.1	0.653
196	18.17	35.01	4.97	0.4	250	15.03	34.50	4.80	0.7	25.60	239.9	0.784
257	14.68	34.46	4.77	0.8	300	12.30	34.24	4.66	1.1	25.96	205.3	0.899
348	10.22	34.12	4.64	1.5	400	8.60	34.06	4.08	1.9	26.47	156.8	1.087
461	7.03	34.04	2.86	2.5	500	6.43	34.10	1.35	2.9	26.81	124.5	1.236
616	5.66	34.23	0.71	3.3	600	5.73	34.21	0.71	3.3	27.00	106.6	1.359
814p	4.72	34.42	0.67	3.5	700	5.22	34.30	0.67	3.4	27.11	95.9	1.468
1016p	4.06	34.54	0.93	3.5	800	4.77	34.41	0.67	3.5	27.26	82.3	1.565
1299p	3.40	34.51u	1.25	3.5	1000	4.10	34.53	0.89	3.5	27.43	66.0	1.732
					1200	3.59		1.16	3.5			

131 **SPENCER F. BAIRD; August 25, 1955; 0129, 0330 GCT; 23°45'N, 150°00'W; sounding, 2900 fm; wind, 070°, force 5; weather, cloudy; sea, very rough; wire angle, 09°, 17°.**

0	23.13	35.01	5.04	0.4	0	23.13	35.01	5.04	0.4	23.93	398.9	0.000
10	23.13	35.03	4.98	0.4	10	23.13	35.03	4.98	0.4	23.95	396.3	0.040
25	23.10	35.07	5.01	0.4	20	23.11	35.06	35.06	0.4	23.97	394.8	0.080
55	22.89	35.01	5.06	0.4	30	23.08	35.06	5.05	0.4	23.99	393.3	0.119
65	22.68	35.00	5.13	0.3	50	22.95	35.02	5.07	0.4	23.99	393.1	0.198
76	22.30	34.99	5.19	0.3	75	22.31	34.99	5.20	0.3	24.14	378.2	0.295
89	21.16	35.01	5.28	0.3	100	20.55	34.97	5.25	0.4	24.62	333.3	0.385
110	20.27	34.95	5.19	0.4	150	19.00	34.94	4.81	0.4	25.00	296.2	0.545
135	19.28	34.92	4.88	0.4	200	16.71	34.58	4.61	0.7	25.28	270.0	0.690
162	18.81	34.97	4.79	0.5	250	12.20	34.06	4.20	1.3	25.85	216.2	0.814
212	15.38	34.37	4.54	0.8	300	10.66	34.04	3.99	1.6	26.11	191.5	0.919
285	11.05	34.04	4.07	1.5	400	8.12	34.06	2.85	2.1	26.54	150.7	1.097
385	8.35	34.05	3.03	2.4r	500	6.10	34.06	1.75	2.5	26.82	123.8	1.241
520	5.65	34.05	1.54	3.2r	600	5.05	34.14	0.96	2.8	27.00	106.0	1.362
705	4.65	34.27	0.57	3.7r	700	4.67	34.27	0.60	3.0	27.15	92.0	1.468
					800	4.36	34.34	0.66	3.2	27.25	82.7	1.563
0	23.09	35.03u	5.00u	0.3u	1000	3.89	34.47	1.05	3.3	27.40	68.5	1.731
8	23.11u	35.03u	4.96u	0.3u	1200	3.29	34.56	1.34	3.4	27.53	56.3	1.874
467	7.12	34.09	2.16	2.3	1500	2.75	34.62	1.65	3.4	27.64	46.0	2.054
629	4.91	34.19	0.76	2.9	2000	2.13	34.65	2.17	3.3	27.71	39.9	2.315
787	4.38	34.34	0.65	3.2	2500	1.73	34.68	2.47	3.2	27.76	34.7	2.549
1022	3.83	34.50	1.08	3.3	3000	1.56	34.71	2.93	3.1	27.80	30.1	2.764
1194	3.31	34.56	1.30	3.4a)								
1397p	2.92	34.61	1.52	3.4b)								
1577	2.64	34.65	1.68	3.1u								
1950	2.18	34.65	2.01	3.2u								
2324	1.83	34.67	2.31	3.1u								
2802	1.60	34.67u	2.79	3.2u								
3283	1.52	34.71	3.12	3.1u								
3769	1.47	34.72	3.31	-								

a) Alternate value, 2.9 μg at/L, not used in interpolation.
b) Alternate value, 3.0 μg at/L, not used in interpolation.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

SPENCER F. BAIRD; August 10, 1955; 1952 GCT; 26°05'N, 114°16'W; sounding, 1500 fm; wind, 300°, force 3; weather, clear; sea, slight; wire angle, 06°. 132

0	22.08	33.78	5.21	0	22.08	33.78	5.21	23.29	459.8	0.000
10	18.98	33.69	5.74	10	18.98	33.69	5.74	24.05	387.3	0.042
25	16.04	33.73	6.20	20	16.88	33.71	6.12	24.57	337.3	0.079
49	12.48	33.48	5.04	30	15.20	33.69	6.10	24.94	302.9	0.111
67	11.95	33.73	3.39	50	12.41	33.48	4.98	25.35	263.3	0.167
78	10.63	33.82	2.70	75	10.80	33.80	2.79	25.90	210.9	0.227
98	10.48	34.03	2.06	100	10.50	34.05	2.00	26.15	187.4	0.278
123	10.64	34.25	1.75	150	10.72	34.45	1.16	26.42	161.5	0.366
151	10.70	34.45	1.16	200	10.22	34.57	0.80	26.60	144.7	0.445
198	10.22	34.57	0.80	250	9.58	34.53	0.44	26.68	137.2	0.518
260	9.47	34.52	0.42	300	9.05	34.51	0.42	26.74	130.6	0.588
352	8.73	34.50	0.45	400	8.25	34.48	0.50	26.85	121.1	0.720
465	7.38	34.43	0.58	500	7.09	34.43	0.58	26.98	108.2	0.842
621	6.30	34.49	0.51	600	6.43	24.47	0.51	27.11	95.8	0.953
838	5.02	34.51	0.71	700	5.84	34.50	0.58	27.20	87.7	1.054
1095	3.91	34.51	0.75	800	5.24	34.51	0.69	27.28	80.1	1.147
1386	3.23	34.58	1.09	1000	4.22	34.51	0.71	27.39	69.5	1.316
				1200	3.65	34.53	0.89	27.47	62.2	1.467

SPENCER F. BAIRD; August 11, 1955; 0405 GCT; 25°49'N, 114°47'W; sounding, 1940 fm; wind, 310°, force 3; weather, clear; sea, slight; wire angle, 25°. 133

0	21.59	33.62	5.11	0	21.59	33.62	5.11	23.31	458.0	0.000
9	20.84	33.62	5.28	10	20.40	33.61	5.25	23.61	428.9	0.044
23	18.65	33.55	5.14	20	18.91	33.55	5.14	23.97	395.3	0.086
45	16.88	33.53	6.07	30	18.18	33.55	5.33	24.14	378.2	0.124
60	15.20	33.44	6.06	50	16.13	33.50	6.07	24.59	335.8	0.196
72	14.23	33.38	5.94	75	13.68	33.36	5.83	25.01	296.0	0.276
91	12.10	33.35	5.12	100	11.60	33.40	4.84	25.45	254.1	0.345
112	11.19	33.49	4.30	150	10.41	34.16	2.06	26.24	178.6	0.454
138	10.56	33.89	2.39	200	9.99	34.26	1.27	26.40	163.4	0.542
179	10.20	34.23	1.44	250	9.54	34.41	0.70	26.60	144.8	0.622
231	9.66	34.36	0.98	300	9.31	34.51	0.32	26.71	134.5	0.694
308	9.28	34.52	0.30	400	8.28	34.47	0.20	26.84	122.1	0.830
404	8.24	34.47	0.21	500	7.37	34.47	0.22	26.98	109.0	0.953
536	7.05	34.47	0.94r	600	6.58	34.47	0.19	27.08	98.6	1.065
719	5.65	34.49	0.19	700	5.80	34.49	0.19	27.20	88.0	1.168
937	4.26	34.52	0.47	800	4.99	34.50	0.29	27.30	77.9	1.258
1204	3.56	34.56	0.71	1000	4.04	34.53	0.51	27.43	66.0	1.420
				1200	3.58	34.56	0.70	27.50	59.3	1.564

134 SPENCER F. BAIRD; August 11, 1955; 1526, 1733 GCT; 25°09'N, 116°02'W; sounding, 2000 fm; wind, 310°, force 3; weather, partly cloudy; sea, slight; wire angle, 32°, 35°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	22.10	33.78	5.12		0	22.10	33.78	5.12		23.29	460.0	0.000
8	21.75	33.77	5.16		10	21.30	33.78	5.19		23.50	439.4	0.045
21	19.77	33.79	5.30		20	19.82	33.79	5.30		23.91	400.6	0.087
42	17.64	33.62	5.58		30	18.80	33.73	5.41		24.12	380.1	0.126
50	16.74	33.54	5.59		50	16.74	33.54	5.59		24.48	346.7	0.199
58	15.99	33.51	5.80		75	14.55	33.38	5.81		24.84	311.8	0.282
66	15.31	33.45	5.85		100	12.46	33.39	5.24		25.27	270.8	0.355
82	13.90	33.33	5.75		150	10.05	33.70	3.10		25.95	206.1	0.476
100	12.46	33.39	5.24		200	10.01	34.21	2.44		26.35	168.0	0.571
124	10.70	33.53	3.81		250	9.64	34.37	1.70		26.55	149.7	0.653
162	9.85	33.85	2.84		300	9.27	34.52	0.41		26.72	132.9	0.727
215	9.84	34.29	2.35		400	7.61	34.43	0.35		26.91	115.8	0.858
293	9.34	34.52	0.46		500	6.60	34.42	0.50		27.04	103.5	0.974
394	7.70	34.43	0.37		600	5.95	34.42	0.26		27.12	95.1	1.081
560	6.18	34.42	0.26		700	5.41	34.45	0.32		27.22	86.2	1.180
					800	5.01	34.46	0.37		27.27	81.4	1.273
0	22.39u	33.75u	5.20u		1000	4.19	34.52	0.68		27.42	67.5	1.441
9	21.44u	33.76u	5.24u		1200	3.60	34.57	0.89		27.51	58.0	1.587
404	7.55	34.38u	0.49u		1500	2.93	34.62	1.19		27.61	48.2	1.778
551	6.38u	34.42	0.53		2000	2.14	34.64	1.99		27.70	40.7	2.052
689	5.46	34.45	0.32									
872	4.76	34.46	0.42									
1015	4.12	34.53	0.71									
1238	3.52	34.58	1.14r									
1466	3.00	34.62	1.14									
1727	2.50	34.56r	1.53									
2095	2.03	34.64	2.11									

135 SPENCER F. BAIRD; August 12, 1955; 1358 GCT; 24°10'N, 117°56'W; sounding, 2000 fm; wind, 335°, force 3; weather, overcast; sea, moderate; wire angle, 15°.

0	22.33	33.93	5.02		0	22.33	33.93	5.02		23.34	455.4	0.000
10	21.30	33.82	5.16		10	21.30	33.82	5.16		23.53	436.3	0.045
24	19.84	33.78	5.39		20	20.19	33.78	5.32		23.79	412.0	0.087
53	17.46	33.61	5.75		30	19.25	33.76	5.48		24.04	388.3	0.127
68	16.28	33.49	5.90		50	17.61	33.63	5.72		24.34	359.9	0.202
82	15.76	33.52	5.81		75	16.06	33.49	5.87		24.60	334.6	0.289
106	14.02	33.42	5.64		100	14.60	33.47	5.70		24.90	306.0	0.370
130	11.90	33.42	4.90		150	10.99	33.64	4.00		25.74	226.1	0.505
158	11.76	34.00	2.49		200	9.72	34.07	2.66		26.30	173.0	0.607
209	9.70	34.17	2.40		250	(9.07)	(34.28)	(0.87)		(26.57)	(147.9)	(0.689)
517p	6.72	34.42	0.28		300	(8.54)	(34.35)	(0.51)		(26.70)	(135.1)	(0.763)
778p	5.14	34.50	0.25		400	(7.65)	(34.39)	(0.36)		(26.87)	(118.5)	(0.896)
1070p	3.94	34.54	0.58		500	(6.86)	(34.42)	(0.29)		(27.00)	(106.3)	(1.016)
1415p	3.11	34.60	1.06		600	6.13	34.44	0.26		27.11	95.8	(1.125)
					700	5.53	34.48	0.25		27.23	85.4	(1.224)
					800	5.04	34.51	0.27		27.30	78.0	(1.314)
					1000	4.17	34.53	0.47		27.42	66.8	(1.477)
					1200	3.59	34.56	0.80		27.51	58.2	(1.622)

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

SPENCER F. BAIRD; August 12, 1955; 1605, 1650 GCT; 24°06.5'N, 118°01'W; sounding, 2000 fm; wind, 315°, force 3; weather, overcast; sea, moderate; wire angle, 11°, 22°. 135A

0	22.33	33.87	5.11	0.5	0	22.33	33.87	5.11	0.5	23.29	459.4	0.000
10	21.46	33.84	5.05	0.5	10	21.46	33.84	5.05	0.5	23.51	438.8	0.045
27	19.68	33.77	5.33	0.5	20	20.18	33.79	5.23	0.5	23.82	409.0	0.087
54	17.52	33.62	5.80	0.5	30	19.55	33.77	5.37	0.5	23.96	395.9	0.128
69	16.47	33.55	5.80	0.5	50	18.60	33.71	5.61	0.5	24.16	376.7	0.205
83	15.90	33.51	5.78	0.5	75	16.25	33.54	5.80	0.5	24.59	336.0	0.295
108	14.50	33.44	5.63	0.6	100	15.00	33.45	5.70	0.6	24.80	315.9	0.377
130	12.64	33.46	5.16	0.9	150	11.70	33.71	4.01	1.3	25.66	234.0	0.516
158	12.16	33.98	2.52	2.1	200	9.00	33.81	3.94	1.7	26.21	181.7	0.621
209	9.22	33.94	3.58	2.0	250	9.34	34.23	2.04	2.0	26.49	155.4	0.708
274	8.90	34.27	1.70	2.0	300	8.57	34.32	1.30	2.1	26.68	136.9	0.784
373	8.15	34.40	0.58	2.4	400	7.95	34.41	0.46	2.4	26.84	121.8	0.920
495	6.91	34.43	0.28	2.5	500	6.85	34.43	0.28	2.5	27.02	105.2	1.041
659	5.68	34.45	0.81	2.5	600	6.08	34.44	0.65	2.5	27.13	94.3	1.149
					700	5.46	34.45	0.80	2.5	27.20	87.3	1.248
871	4.64	34.48	0.48	2.6	800	4.95	34.46	0.50	2.6	27.27	80.9	1.341
1116	3.83	34.54	0.71	2.6	1000	4.19	34.52	0.59	2.6	27.40	68.4	1.509
1416	3.11	34.60	1.18	2.4	1200	3.62	34.55	0.85	2.6	27.49	60.0	1.657

SPENCER F. BAIRD; August 13, 1955; 0526, 0656 GCT; 23°09'N, 119°47'W; sounding, 2000 fm; wind, 295°, force 2; weather, overcast; sea, moderate; wire angle, 12°, 09°. 136

0	21.47	34.08	5.13	0.5	0	21.47	34.08	5.13	0.5	23.69	422.1	0.000
10	21.42	34.07	5.16	0.5	10	21.42	34.07	5.16	0.5	23.69	421.5	0.042
24	20.46	34.10	5.24	0.5	20	21.40	34.09	5.17	0.5	23.71	419.3	0.084
53	19.94	34.16	5.34	0.4	30	20.40	34.11	5.23	0.5	24.00	392.1	0.125
62	19.00	34.07	5.51	0.4	50	20.30	34.16	5.26	0.5	24.06	385.9	0.203
72	17.64	33.79	5.66	0.5	75	17.40	33.76	5.69	0.5	24.48	345.8	0.295
87	16.78	33.69	5.72	0.5	100	16.23	33.69	5.60	0.6	24.70	324.9	0.379
106	15.98	33.70	5.52	0.6	150	11.50	33.57	4.32	1.3	25.59	239.9	0.522
129	12.92	33.51	4.90	1.0	200	10.32	34.12	2.10	2.3	26.23	180.0	0.629
157	11.16	33.62	4.03	1.5	250	9.77	34.35	1.80	2.6	26.51	153.7	0.715
209	10.23	34.20	2.03	2.4	300	9.08	34.38	1.37	2.7	26.65	140.1	0.791
284	9.30	34.38	1.53	2.7	400	7.61	34.39	0.41	3.1	26.87	118.6	0.927
387	7.77	34.39	0.47	3.0	500	6.85	34.40	0.26	3.2	26.99	108.0	1.047
459p	7.10u	34.39u	0.29u	3.2	600	6.10	34.44	0.29	3.3	27.12	95.4	1.157
525	6.66	34.40	0.24	3.2	700	5.47	34.49	0.31	3.4	27.23	84.1	1.255
					800	5.01	34.51	0.30	3.4	27.31	77.5	1.345
0	21.32u	34.02u	5.20u	0.5	1000	4.12	34.57	0.61	3.4	27.45	64.3	1.505
10	21.32u	34.04u	5.15u	0.5	1200	3.53	34.56	0.82	3.4	27.51	58.2	1.635
485	7.08u	34.40u	0.30	3.2	1500	2.88	34.62	1.48	3.3	27.61	48.2	1.825
656	5.69	34.47	0.32	3.4	2000	2.11	34.69	2.07	3.1	27.74	36.3	2.088
817	4.94	34.51	0.31	3.4								
1007	4.09	34.57	0.61	3.4								
1197	3.54	34.56	0.82	3.5u								
1461	2.95	34.61	1.71u	3.3								
1723	2.48	34.64	1.81	3.2								
2010	2.10	34.69	2.08	3.0u								
2408	1.85	34.67r	2.46	3.0								

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NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

137 SPENCER F. BAIRD; August 13, 1955; 0107, 0242, 0337 GCT; 21°53'N, 122°14.5'W; sounding, 2000 fm; wind, 355°, force 3; weather, overcast; sea, moderate; wire angle, 10°, 16°, 19°.

0	21.92	34.47	5.03	0.5	0	21.92	34.47	5.03	0.5	23.86	404.9	0.000
10	21.89	34.49	5.06	0.4	10	21.89	34.49	5.06	0.4	23.89	402.8	0.040
25	21.22	34.42	5.12	0.4	20	21.70	34.48	5.06	0.4	23.94	397.8	0.081
54	20.60	34.49	5.25	0.4	30	20.92	34.42	5.18	0.4	24.10	382.5	0.120
64	19.82	34.38	5.44	0.4	50	20.63	34.49	5.24	0.4	24.22	370.7	0.195
74	18.94	34.22	5.52	0.5	75	18.92	34.22	5.52	0.5	24.47	347.4	0.286
88	18.90	34.34	5.42	0.4	100	18.61	34.37	5.40	0.4	24.66	329.4	0.371
107	18.40	34.36	5.39	0.4	150	13.15	33.71	4.68	1.0	25.38	260.1	0.520
131	15.62	33.96	5.12	0.6	200	10.40	33.96	4.00	1.7	26.09	192.7	0.635
159	12.48	33.78	4.54	1.1	250	9.52	34.26	2.30	2.3	26.47	156.7	0.725
209	10.08	33.98	3.70	1.8	300	9.11	34.41	1.21	2.5	26.66	138.7	0.802
285	9.26	34.40	1.47	2.7r	400	8.05	34.46	0.40	2.8	26.86	119.8	0.937
386	8.20	34.45	0.43	3.1r	500	7.09	34.47	0.28	3.0	27.02	104.9	1.058
513p	6.92	34.54u	0.27	3.3r	600	6.32	34.52	0.27	3.1	27.16	91.9	1.154
522	6.78	34.48	0.24	3.3r	700	5.77	34.56	0.28	3.1	27.26	82.0	1.260
					800	5.21	34.56	0.34	3.2	27.32	76.0	1.348
0	21.83u	34.49u	5.35u	0.4u	1000	4.36	34.56	0.57	3.4	27.43	66.8	1.511
10	21.82u	34.55u	5.20u	0.4	1200	3.69	34.56	0.81	3.4	27.49	60.1	1.656
475	7.40	34.52u	0.32	2.9	1500	2.94	34.64	1.30	3.4	27.63	47.3	1.848
642	6.09	34.56	0.28	3.1	2000	2.14	(34.69)	(2.10)	3.1	(27.74)	(36.5)	(2.109)
798	5.22	34.56	0.33	3.2								
982	4.41	34.56	0.54	3.4								
1166	3.79	34.56	0.74	3.4								
1420	3.11	34.61	1.12	3.4								
1697	2.58	34.66	1.57	3.2u								
1982	2.16	34.69	2.03	3.2								
2374	1.86	34.61r	-	3.0								

138 SPENCER F. BAIRD; August 15, 1955; 1044, 1122 GCT; 21°48'N, 124°44'W; sounding, 2502 fm; wind, 040°, force 3; weather, sky obscured; sea, moderate; wire angle, 04°, 09°.

0	20.75	34.17	5.21	0.5	0	20.75	34.17	5.21	0.5	23.96	396.1	0.000
10	20.75	34.15	5.22	0.4	10	20.75	34.15	5.22	0.4	23.94	397.4	0.040
25	20.23	34.12	5.31	0.4	20	20.53	34.18	5.26	0.4	24.02	390.3	0.079
55	19.53	34.22	5.42	0.5	30	20.15	34.13	5.33	0.4	24.08	384.6	0.118
69	18.59	34.14	5.59	0.4	50	19.86	34.27	5.37	0.4	24.27	366.4	0.193
84	17.92	34.07	5.58	0.4	75	18.30	34.11	5.58	0.4	24.54	340.5	0.282
108	17.74	34.23	5.51	0.4	100	17.79	34.20	5.53	0.4	24.73	322.1	0.366
132	16.12	34.05	5.28	0.6	150	14.28	33.82	5.06	0.8	25.24	274.2	0.517
159	13.12	33.73	4.87	0.9	200	10.57	33.87	3.87	1.7	26.00	201.6	0.638
211	10.14	33.93	3.61	1.9	250	9.20	34.10	2.73	2.4	26.40	163.4	0.732
278	8.73	34.19	2.07	2.6	300	8.40	34.25	1.47	2.8	26.65	140.0	0.810
378	7.76	34.35	0.71	3.1	400	7.57	34.36	0.65	3.1	26.86	120.4	0.947
499	6.45	34.37	0.42	3.3	500	6.44	34.37	0.42	3.3	27.02	104.7	1.066
670	5.65	34.47	0.31	3.5	600	5.95	34.42	0.34	3.4	27.13	94.4	1.173
					700	5.53	34.48	0.32	3.5	27.22	86.1	1.272
908	4.48	34.51	0.43	3.6	800	5.03	34.49	0.33	3.6	27.29	79.0	1.363
1167	3.66	34.56	0.76	3.5	1000	4.17	34.53	0.53	3.6	27.42	67.4	1.528
1481	3.06	34.58	1.15	3.6u	1200	3.59	34.56	0.82		27.51	58.7	1.673

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

SPENCER F. BAIRD; August 16-17, 1955; 2316, 0105 GCT; 21°53'N, 127°38'W; sounding, 2000 fm; wind, 040°, force 3; weather, overcast; sea, moderate; wire angle, 15°, 21°. 139

0	20.60	34.22	5.29	0.5	0	20.60	34.22	5.29	0.5	24.03	389.0	0.000	
9	20.56	34.25	5.25	0.5	10	20.56	34.25	5.24	0.5	24.07	385.5	0.039	
24	20.53	34.23	5.25	0.5	20	20.55	34.23	5.24	0.5	24.05	387.2	0.077	
53	20.20	34.52	5.30	0.4	30	20.41	34.23	5.23	0.5	24.09	383.8	0.116	
63	20.06	34.59	5.40	0.5	50	20.22	34.47	5.28	0.4	24.33	360.9	0.191	
72	19.65	34.61	5.47	0.4	75	19.59	34.61	5.47	0.4	24.59	335.3	0.279	
87	19.30	34.60	5.49	0.4	100	18.98	34.60	5.39	0.4	24.75	320.9	0.361	
104	18.86	34.60	5.37	0.4	150	16.78	34.31	5.13	0.6	25.06	290.9	0.517	
129	18.16	34.53	5.32	0.4	200	12.02	33.76	4.50	1.3	25.65	234.9	0.651	
151p	16.70	34.30	5.12	0.6	250	9.80	34.00	3.60	1.9	26.22	180.7	0.757	
156	16.06	34.19	5.08	0.6	300	8.54	34.08	3.20	2.0	26.50	154.6	0.843	
267p	8.95u	34.04u	0.77u	2.1	400	7.22	34.25	1.13	2.9	26.82	123.7	0.989	
430p	6.81	34.29	3.76u	3.2	500	6.40	34.32	0.52	3.2	26.99	107.6	1.111	
641p	5.56	34.45	0.38	3.7	600	5.72	34.44	0.38	3.3	27.18	90.0	1.218	
					700	5.13	34.45	0.46	3.3	27.24	83.9	1.313	
0	20.56u	34.23u	5.29	0.5	800	4.69	34.46	0.60	3.3	27.31	77.7	1.402	
10	20.58u	34.22u	5.29u	0.6	1000	4.03	34.53	0.73	3.4	27.43	65.6	1.563	
141	17.58	34.48	5.29	0.5	1200	3.48	34.58	0.99	3.3	27.53	56.1	1.703	
188	12.77	33.75	4.76	1.1	1500	2.83	34.61	1.40	3.2	27.62	48.2	1.889	
235	10.37	33.93	3.52	1.9	2000	2.13	34.67	2.03	3.0	27.72	38.6	2.155	
282	8.90	34.08	3.82	1.9									
329	8.06	34.09	2.18	2.4									
374	7.59	34.20	1.54	2.8									
462	6.66	34.29	0.65	3.1									
617	5.61	34.45	0.38	3.3									
754	4.86	34.45	0.56	3.3									
937	4.23	34.52	0.68	3.4									
1112	3.72	34.57	0.84	3.3									
1354	3.12	34.60	1.20	3.2									
1599	2.66	34.62	1.49	3.1									
1873	2.26	34.66	1.88	3.0									
2255	1.92	34.68	2.32	2.9									

SPENCER F. BAIRD; August 18, 1955; 0930 GCT; 21°52.5'N, 130°32'W; sounding, 2000 fm; wind, 045°, force 2; weather, overcast; sea, moderate; wire angle, 17°. 140

0	20.73	34.76	5.19	0.4	0	20.73	34.76	5.19	0.4	24.41	353.0	0.000	
10	20.74	34.76	5.16	0.4	10	20.74	34.76	5.16	0.4	24.41	353.2	0.035	
24	20.74	34.74	5.25	0.4	20	20.74	34.75	5.23	0.4	24.39	354.3	0.071	
51	20.50	34.74	5.29	0.4	30	20.71	34.74	5.29	0.4	24.40	354.0	0.106	
66	20.35	34.77	5.32	0.4	50	20.51	34.74	5.29	0.4	24.45	349.0	0.177	
80	19.54	34.74	5.44	0.4	75	20.00	34.77	5.39	0.4	24.60	334.4	0.263	
102	18.70	34.66	5.42	0.4	100	18.73	34.66	5.42	0.4	24.85	310.7	0.344	
125	18.13	34.65	5.40	0.4	150	17.57	34.61	5.28	0.4	25.10	287.0	0.496	
153	17.48	34.60	5.26	0.4	200	12.06	33.86	4.44	1.2	25.72	228.5	0.627	
203	11.84	33.86	4.38	1.3	250	10.30	34.13	3.16	2.1	26.25	178.0	0.732	
268	9.80	34.21	2.68	2.3	300	9.15	34.26	2.18	2.6	26.54	150.8	0.817	
365	8.11	34.27	1.45	2.9	400	7.60	34.28	1.14	3.0	26.79	126.4	0.962	
485	6.67	34.34	0.57	3.1	500	6.58	34.36	0.52	3.1	27.00	106.6	1.086	
647	5.86	34.46	0.34	3.4	600	6.08	34.44	0.35	3.3	27.12	95.0	1.194	
865	4.80	34.51	0.51	3.5	700	5.60	34.48	0.35	3.5	27.22	86.0	1.293	
1116	3.89	34.55	0.80	3.5	800	5.10	34.50	0.44	3.5	27.29	79.4	1.385	
1419	3.06	34.59	1.22	3.5	1000	4.27	34.53	0.67	3.5	27.41	68.0	1.551	
					1200	3.64	34.56	0.89	3.5	27.49	60.2	1.699	

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141 SPENCER F. BAIRD; August 20, 1955; 0527, 0659 GCT; 21°52'N, 133°51'W; sounding, 2000 fm; wind, 040°, force 3; weather, missing; sea, moderate; wire angle, 17°, 12°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	21.04	34.78	5.20	0.4	0	21.04	34.78	5.20	0.4	24.33	360.0	0.000
10	21.02	34.77	5.02	0.4	10	21.02	34.77	5.02	0.4	24.33	360.0	0.036
24	21.01	34.79	5.24	0.4	20	21.01	34.79	5.23	0.4	24.35	358.8	0.072
54	20.78	34.76	5.33	0.4	30	21.00	34.79	5.26	0.4	24.35	358.1	0.108
62	20.14	34.72	5.33	0.4	50	20.92	34.78	5.30	0.4	24.37	357.0	0.180
73	19.90	34.71	5.28	0.4	75	19.87	34.71	5.28	0.4	24.60	335.2	0.267
86	19.56	34.74	5.23	0.4	100	19.35	34.83	5.20	0.4	24.82	313.9	0.349
106	19.25	34.84	5.19	0.4	150	18.27	34.73	5.00	0.5	25.02	294.9	0.503
130	18.76	34.80	5.09	0.4	200	15.92	34.31	4.90	0.7	25.26	271.9	0.648
157	18.11	34.70	4.99	0.5	250	12.00	34.04	4.50	1.2	25.87	214.2	0.772
207	15.12	34.21	4.87	0.7	300	10.03	34.04	3.84	1.9	26.22	180.9	0.874
277	10.65	34.02	4.19	1.6	400	7.90	34.24	1.57	3.0	26.71	133.9	1.038
373	8.25	34.21	1.99	2.8u	500	6.86	34.30	0.77	3.0	26.91	115.2	1.170
504	6.64u	34.32u	0.63u	3.6r	600	5.85	34.37	0.53	3.2	27.10	97.4	1.284
692	5.41	34.45	0.53	3.8r	700	5.37	34.46	0.53	3.3	27.22	85.9	1.384
					800	4.85	34.49	0.60	3.4	27.31	77.2	1.474
0	21.01u	34.80u	5.17u	0.4u	1000	4.13	34.52	0.81	3.5	27.42	67.1	1.636
10	21.00u	34.79u	5.22u	0.4u	1200	3.61	34.58	0.96	3.5	27.51	58.0	1.780
502	6.98u	34.28u	0.82u	3.0	1500	2.86	34.60	1.33	3.5	27.60	49.8	1.970
653	5.50	34.41	0.54	3.3	2000	2.10	34.68	2.10	3.4	27.73	37.2	2.235
815	4.78	34.49	0.60	3.4								
1004	4.11	34.52	0.81	3.5								
1193	3.63	34.58	0.94	3.5								
1455	2.96	34.60	1.32	3.5								
1719	2.46	34.61	1.84	3.3r								
2007	2.09	34.68	2.09	3.4								
2402	1.80	34.69	2.51	3.3								

142 SPENCER F. BAIRD; September 16, 1955; 1218, 1358 GCT; 24°25'N, 113°02'W; sounding, 1700 fm; wind, 310°, force 2; weather, clear; sea, slight; wire angle, 19°, 28°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	26.23	33.84	4.79	0.7	0	26.23	33.84	4.79	0.7	22.11	572.9	0.000
9	19.96	33.67	5.54	0.6	10	19.84	33.67	5.55	0.6	23.81	409.9	0.049
24	18.02	33.65	5.72	0.6	20	18.55	33.66	5.66	0.6	24.13	379.2	0.089
53	13.36	33.39	5.90	0.8	30	17.20	33.61	5.79	0.6	24.42	351.9	0.125
62	12.25	33.37	5.11	1.1	50	13.80	33.41	5.91	0.7	25.02	295.0	0.190
72	11.64	33.40	5.01	1.3	75	11.45	33.41	4.92	1.4	25.48	251.2	0.259
84	11.00	33.44	4.47	1.5	100	10.35	33.56	3.89	1.9	25.79	221.3	0.318
103	10.30	33.58	3.83	1.9	150	11.16	34.39	1.20	2.9	26.28	174.6	0.419
126	10.61	34.09	2.14	2.5	200	10.38	34.36	1.18	2.9	26.41	162.6	0.505
152	11.21	34.41	1.12	2.9	250	10.03	34.49	0.67	3.1	26.57	147.4	0.585
201	10.36	34.36	1.18	2.9	300	9.60	34.55	0.39	3.3	26.69	135.9	0.659
268	9.88	34.54	0.53	3.2	400	8.50	34.54	0.22	3.4	26.86	119.8	0.794
360	9.00	34.56	0.25	3.4	500	7.37	34.51	0.19	3.5	27.00	106.2	0.915
489	7.47	34.51	0.18	3.5	600	6.60	34.52	0.20	3.7	27.11	95.9	1.024
669	6.12	34.53	0.23	3.7u	700	5.90	34.52	0.23	3.8	27.21	87.1	1.125
					800	5.25	34.48	0.24	3.8	27.26	81.7	1.218
0	26.02u	33.86u	4.81u	0.8u	1000	4.18	34.50	0.50	4.0	27.40	69.2	1.389
9	20.78u	33.68u	5.45u	0.7u	1200	3.59	34.56	0.78	4.1	27.50	59.4	1.537
447	8.26u	34.49u	0.21u	3.4	1500	2.91	34.60	1.20	4.0	27.60	50.2	1.731
605	6.58	34.52	0.21	3.7u	2000	2.13	34.63	1.90	3.8	27.68	41.9	2.011
753	5.56	34.49	0.23	3.8								
930	4.44	34.48	0.40	3.9								
1106	3.83	34.54	0.67	4.1								
1351	3.20	34.58	0.96	3.8r								
1597	2.74	34.60	1.31	4.0								
1872	2.28	34.62	1.73	3.7u								
2250	1.93	34.64	2.31	3.7								

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	
SPENCER F. BAIRD; September 16, 1955; 1955 GCT; 23°59.5'N, 113°44.5'W; sounding, 1900 fm; wind, 020°, force 1; weather, partly cloudy; sea, moderate; wire angle, 12°.													143
0	27.56	34.17	4.74	0.9	0	27.56	34.17	4.74	0.9	21.94	589.2	0.000	
10	27.02	34.16	4.78	0.9	10	27.02	34.16	4.78	0.9	22.10	573.2	0.058	
24	19.46	34.09	5.31	0.9	20	21.60	34.10	5.24	0.9	23.67	423.8	0.108	
55	14.58	34.05	3.51	2.2	30	18.75	34.08	5.23	1.0	24.40	353.7	0.147	
68	13.32	34.13	1.96	2.7	50	15.60	34.05	4.37	1.9	25.13	284.7	0.211	
84	12.00	34.04	1.85	2.7	75	12.71	34.08	1.87	2.7	25.76	224.1	0.275	
107	10.80	34.03	2.07	2.6	100	11.01	34.02	2.02	2.6	26.04	198.0	0.329	
130	10.42	34.21	1.63	2.9	150	11.21	34.50	1.06	3.0	26.37	166.0	0.421	
159	10.62	34.41	1.11	3.0a)	200	10.28	34.48	0.81	3.1	26.52	151.8	0.503	
210	10.18	34.49	0.74	3.2	250	9.63	34.47	0.61	3.6	26.62	142.4	0.579	
275	9.29	34.46	0.53	3.7u	300	9.14	34.48	0.44	3.7	26.71	134.0	0.651	
372	8.61	34.54	0.19	3.7u	400	8.33	34.54	0.19	3.7	26.88	117.9	0.784	
494	7.30	34.49	0.21	3.8u	500	7.23	34.49	0.21	3.8	27.00	106.2	0.903	
655	5.87	34.47	0.21	4.1u	600	6.29	34.47	0.21	4.0	27.12	95.3	1.012	
873	4.70	34.49	0.34	4.2u	700	5.58	34.47	0.22	4.1	27.21	86.6	1.112	
1123	3.83	34.52	0.63	4.2u	800	5.03	34.48	0.28	4.2	27.28	80.3	1.205	
1422	3.12	34.61	1.06	4.3u	1000	4.23	34.50	0.49	4.2	27.39	69.8	1.374	
					1200	3.63	34.54	0.76	4.2	27.48	60.9	1.525	
SPENCER F. BAIRD; September 17, 1955; 0452 GCT; 23°26'N, 114°56'W; sounding, 2000 fm; wind, calm; weather, clear; sea, slight; wire angle, 0°.													144
0	27.00	34.03	4.70	0.8	0	27.00	34.03	4.70	0.8	22.01	582.0	0.000	
10	26.50	34.05	4.73	0.7	10	26.50	34.05	4.73	0.7	22.19	565.2	0.057	
25	21.95	34.07	5.26	0.7	20	22.70	34.07	5.17	0.7	23.33	455.7	0.108	
55	19.71	34.04	5.44	0.7	30	21.52	34.07	5.30	0.7	23.66	424.1	0.153	
65	18.48	33.80	5.60	0.7	50	20.03	34.05	5.41	0.7	24.05	387.6	0.234	
70	16.42	33.58	5.73	0.7	75	16.13	33.58	5.68	0.7	24.64	330.7	0.324	
90	15.25	33.57	5.50	0.8	100	13.79	33.54	4.92	1.1	25.12	285.2	0.402	
110	12.16	33.53	4.09	1.7	150	11.10	33.91	2.52	2.6	25.93	208.1	0.526	
136	11.40	33.78	3.11	2.3	200	10.68	34.32	1.48	3.1	26.32	170.9	0.623	
165	10.91	34.06	2.18	2.8	250	9.98	34.47	0.86	3.4	26.56	148.1	0.705	
217	10.42	34.40	1.24	3.2u	300	9.38	34.50	0.57	3.6	26.69	136.2	0.779	
293	9.46	34.50	0.62	3.6u	400	8.23	34.47	0.31	3.8	26.85	121.3	0.915	
396	8.27	34.47	0.33	3.8u	500	7.19	34.47	0.21	4.0	27.00	106.9	1.037	
532	6.94	34.47	0.19	4.1u	600	6.35	34.46	0.21	4.2	27.11	96.7	1.147	
720	5.44	34.45	0.31	4.2u	700	5.58	34.45	0.28	4.2	27.20	88.2	1.248	
SPENCER F. BAIRD; September 13, 1955; 0930 GCT; 22°26.5'N, 116°48'W; sounding, 2200 fm; wind, 350°, force 1; weather, overcast; sea, moderate; wire angle, 14°.													145
0	24.86	34.29	4.74	0.4	0	24.86	34.29	4.74	0.4	22.87	500.0	0.000	
10	24.48	34.30	4.74	0.4b)	10	24.48	34.30	4.74	0.4	22.99	488.8	0.049	
23	22.36	34.11	5.10	0.5	20	22.98	34.17	5.00	0.5	23.34	455.2	0.097	
53	18.88	33.93	5.53	0.5	30	20.98	34.02	5.30	0.5	23.76	414.6	0.140	
68	17.08	33.62	5.76	0.6	50	19.11	33.94	5.49	0.5	24.21	372.3	0.219	
82	16.16	33.56	5.74	0.6	75	16.57	33.58	5.75	0.6	24.54	340.2	0.309	
107	14.24	33.53	5.41	0.7	100	14.78	33.53	5.51	0.6	24.91	305.5	0.390	
130	11.86	33.58	4.08	1.6	150	11.38	33.92	3.00	2.3	25.89	212.0	0.521	
158	11.36	34.07	2.38	2.3	200	11.00	34.35	1.30	2.5	26.29	173.9	0.620	
251p	9.61	34.42	0.87	3.0u	250	9.61	34.42	0.87	3.0	26.58	146.1	0.702	
417p	8.18	34.45	0.31	3.4u	300	9.18	34.43	0.60	3.1	26.67	138.0	0.776	
584p	6.30	34.49	0.29	3.7u	400	8.35	34.45	0.32	3.4	26.81	124.5	0.914	
822p	5.00	34.47	0.35	3.9u	500	7.27	34.47	0.29	3.6	26.98	108.1	1.038	
1122p	3.90	34.55	0.52	4.0u	600	(6.19)	(34.49)	(0.29)	3.7	(27.15)	(92.1)	(1.147)	
1417p	3.16	34.57	1.02	3.9u	700	(5.54)	(34.48)	(0.30)	3.8	(27.22)	(85.9)	(1.245)	
					800	(5.08)	(34.47)	(0.34)	3.9	(27.26)	(81.8)	(1.338)	
					1000	4.32	34.53	0.43	4.0	27.41	68.1	(1.507)	
					1200	3.68	34.56	0.65	4.0	27.49	60.2	(1.656)	

a) Alternate value, 2.5 μg at/L, not used in interpolation.
b) Alternate value, 0.6 μg at/L, not used in interpolation.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

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SPENCER F. BAIRD; September 12, 1955; 1755, 1944 GCT; 21°21.5'N, 118°40'W; sounding, 2000 fm; wind, 330°, force 1; weather, cloudy; sea, slight; wire angle, 05°, 05°.

0	24.39	34.14	5.19	0.6	0	24.39	34.14	5.19	0.6	22.90	497.2	0.000
10	23.82	34.14	5.12	0.6	10	23.82	34.14	5.12	0.6	23.07	481.1	0.049
25	21.32	34.04	5.52	0.5	20	23.60	34.14	5.15	0.6	23.13	475.0	0.097
56	17.32	33.62	6.22	0.6	30	19.71	33.84	5.88	0.5	23.98	393.9	0.140
65	16.60	33.57	6.04	0.6	50	17.65	33.64	6.20	0.6	24.34	359.5	0.216
75	15.70	33.52	5.93	0.7	75	15.70	33.52	5.93	0.7	24.70	325.3	0.302
90	14.76	33.48	5.79	0.8	100	14.10	33.47	5.55	0.9	25.01	295.7	0.380
109	13.52	33.46	5.31	1.0	150	11.38	33.77	3.33	2.1	25.78	222.8	0.512
133	11.91	33.60	4.18	1.8	200	10.20	34.19	2.25	2.5	26.31	172.0	0.613
161	11.08	33.91	2.88	2.4	250	9.82	34.47	1.03	3.1	26.59	145.5	0.695
212	10.43	34.36	1.39	2.9	300	9.12	34.52	0.80	3.2	26.74	131.1	0.767
290	9.27	34.52	0.87	3.2	400	7.78	34.43	0.40	3.5	26.88	117.9	0.898
393	7.84	34.43	0.42	3.6r	500	6.91	34.47	0.29	3.6	27.04	102.7	1.015
532	6.64	34.47	0.29	3.9r	600	6.10	34.46	0.31	3.6	27.14	93.9	1.121
722	5.42	34.44u	0.46u	4.0r	700	5.52	34.44	0.38	3.7	27.19	88.1	1.221
					800	5.04	34.51	0.38	3.8	27.30	78.1	1.313
0	24.53u	34.16u	5.04u	0.6	1000	4.27	34.54	0.57	3.9	27.41	67.8	1.477
10	23.76u	34.14	5.09u	0.6	1200	3.61	34.59	0.81	3.9	27.52	57.2	1.622
492	7.10u	34.51u	0.28u	3.6	1500	2.94	34.60	1.22	3.8	27.60	50.1	1.814
662	5.70	34.47u	0.33u	3.7	2000	2.14	34.67	2.12		27.72	38.2	2.089
822	4.94	34.53	0.38	3.8								
1013	4.22	34.54	0.60	3.9								
1203	3.60	34.59	0.81	3.9								
1467	3.01	34.60	1.17	3.8								
1733	2.50	34.67	1.70	3.7								
2029	2.11	34.67	2.13	3.7u								

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SPENCER F. BAIRD; September 11, 1955; 2050, 2305 GCT; 20°03'N, 121°17.5'W; sounding, 2000 fm; wind, 260°, force 2; weather, cloudy; sea, slight; wire angle, 15°, 15°.

0	23.78	34.39	4.85	0.7	0	23.78	34.39	4.85	0.7	23.27	462.0	0.000
9	23.71	34.38	4.98	0.7	10	23.72	34.38	4.98	0.7	23.28	460.6	0.046
24	23.66	34.40	4.92	0.7	20	23.68	34.40	4.93	0.7	23.31	458.0	0.092
53	20.68	34.22	5.33	0.7	30	23.44	34.39	4.90	0.7	23.37	452.1	0.138
63	20.64	34.51	5.31	0.7	50	20.80	34.22	5.37	0.7	23.98	394.0	0.223
75	20.16	34.45	5.37	0.7	75	20.16	34.45	5.37	0.7	24.32	361.2	0.318
87	18.63	34.03	5.53	0.7	100	17.30	33.83	5.47	0.7	24.57	337.8	0.406
106	16.82	33.81	5.46	0.7	150	12.24	33.92	3.29	2.2	25.72	228.1	0.549
131	14.02	33.75	4.66	1.3	200	11.06	34.38	1.27	3.0	26.31	172.6	0.651
159	11.65	33.98	2.76	2.5	250	10.29	34.49	0.88	3.0	26.52	151.8	0.735
213	10.77	34.41	1.16	3.0	300	9.75	34.53	0.51	3.1	26.65	140.2	0.811
288	9.88	34.52	0.57	3.3r	400	8.28	34.51	0.34	3.2	26.87	119.5	0.947
389	8.43	34.51	0.34	3.6r	500	7.23	34.49	0.29	3.4	27.01	106.1	1.068
524	6.79u	34.47u	0.36u	3.9r	600	6.38	34.49	0.41	3.5	27.12	95.0	1.176
711	5.48u	34.49u	0.27u	4.2r	700	5.68	34.50	0.52	3.6	27.23	85.3	1.276
					800	5.25	34.54	0.28	3.6	27.30	78.0	1.367
0	23.80u	34.36u	4.86u	0.7	1000	4.33	34.56	0.51	3.7	27.42	66.6	1.531
10	23.76u	34.38u	4.92u	0.6u	1200	3.74	34.57	0.80	3.5	27.49	59.8	1.677
475	7.71u	34.51u	0.25u	3.3	1500	2.96	34.63	1.45	3.4	27.62	48.0	1.869
635	6.17u	34.51u	0.28u	3.5	2000	2.18	34.66	2.01		27.70	40.0	2.139
789	5.28	34.54	0.52u	3.6								
967	4.46	34.55	0.44	3.7								
1147	3.88	34.56	0.64	3.5								
1397	3.22	34.60	1.16	3.4								
1650	2.68	34.64	1.66	3.3								
1926	2.26	34.65	1.93	3.2								
2306	1.92	34.66	2.38	3.2u								

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

SPENCER F. BAIRD; September 11, 1955; 0233 GCT; 19°59.5'N, 124°06'W; sounding, 2000 fm; wind, 340°, force 2; weather, cloudy; sea, slight; wire angle, 25°. 148

0	22.62	34.54	5.17	0.7	0	22.62	34.54	5.17	0.7	23.71	419.2	0.000
9	22.63	34.51	5.09	0.7	10	22.64	34.51	5.08	0.7	23.68	422.0	0.042
22	21.28r	34.49	5.20	0.7	20	22.64	34.50	5.18	0.7	23.68	422.0	0.084
49	20.72	34.42	5.44	0.7	30	22.63	34.49	5.22	0.7	23.68	422.0	0.127
62	19.73	34.27	5.50	0.8	50	20.60	34.40	5.48	0.7	24.18	374.5	0.207
75	19.03	34.22	5.54	0.8	75	19.03	34.22	5.54	0.8	24.44	350.0	0.298
96	18.37	34.13	5.56	0.8	100	18.15	34.11	5.53	0.8	24.58	337.0	0.385
116	17.06	34.00	5.38	0.8	150	12.80	33.81	4.62	1.7	25.53	246.5	0.533
141	13.81	33.77	4.98	1.3	200	10.45	34.14	2.50	2.7	26.22	180.6	0.641
187	10.92	34.02	2.97	2.5	250	10.45	34.60	0.88	3.3	26.58	146.5	0.725
246	10.53	34.60	0.90	3.3u	300	9.72	34.54	0.60	3.4	26.66	138.9	0.800
364	8.93	34.49	0.48	3.5u	400	8.40	34.47	0.72	3.6	26.82	123.8	0.938
442	7.72	34.47	1.13	3.8u	500	7.00	34.51	0.70	4.0	27.06	101.3	1.058
591	6.31	34.52	0.27	4.2u	600	6.25	34.52	0.27	4.2	27.17	91.0	1.162
790	5.28	34.52	0.29	4.4u	700	5.71	34.52	0.27	4.3	27.23	84.7	1.259
1024	4.15	34.56	0.55	4.5u	800	5.24	34.52	0.30	4.4	27.29	79.5	1.350
1320	3.34	34.63	0.98	4.6u	1000	4.26	34.55	0.51	4.5	27.43	65.9	1.515
					1200	3.63	34.61	0.78	4.6	27.53	56.1	1.657

SPENCER F. BAIRD; September 10, 1955; 0616, 0815 GCT; 19°56'N, 126°52'W; sounding, 2400 fm; wind, 020°, force 3; weather, partly cloudy; sea, moderate; wire angle, 12°, 13°. 149

0	12.98r	34.72	4.99u	0.7	0	22.58	34.72	5.00	0.7	23.86	405.0	0.000
10	22.56	34.72	5.04	0.8	10	22.56	34.72	5.04	0.8	23.87	404.3	0.041
25	22.54	34.71	5.04	0.8	20	22.54	34.71	5.04	0.8	23.87	404.2	0.081
53	21.48	34.59	5.22	0.7	30	22.49	34.70	5.05	0.8	23.87	404.2	0.122
63	20.36	34.51	5.35	0.8	50	22.29	34.66	5.10	0.8	23.91	400.1	0.202
74	19.94	34.47	5.37	0.8	75	19.90	34.46	5.39	0.8	24.40	353.9	0.297
88	19.29	34.38	5.40	0.8	100	18.81	34.34	5.30	0.8	24.59	336.1	0.384
106	18.58	34.33	5.24	0.8	150	15.83	34.06	4.73	1.0	25.08	289.3	0.543
131	17.86	34.34	5.07	0.8	200	12.01	34.06	3.10	2.2	25.88	213.4	0.670
158	14.74	33.95	4.53	1.3	250	10.19	34.21	2.35	2.7	26.33	170.6	0.769
209	11.59	34.08	2.88	2.3	300	9.10	34.35	1.68	3.1	26.62	142.6	0.850
281	9.40	34.31	2.03	3.0	400	7.99	34.43	0.46	3.4	26.86	120.2	0.989
382	8.12	34.43	0.52	3.8r	500	6.96	34.44	0.30	3.5	27.01	105.7	1.110
518	6.62	34.45	0.30	4.1r	600	6.16	34.46	0.20	3.6	27.13	94.7	1.218
707	5.39	34.49	0.34	4.4r	700	5.42	34.49	0.32	3.6	27.24	83.6	1.316
					800	5.04	34.51	0.42	3.6	27.30	78.0	1.406
0	22.58	34.72	5.00	0.8u	1000	4.27	34.53	0.58	3.7	27.40	68.6	1.571
10	20.11r	34.71u	5.00u	0.7u	1200	3.60	34.59	0.86	3.8	27.53	56.7	1.716
473	7.35	34.44	0.33	3.5	1500	2.88	34.61	1.52	(3.9)	27.61	48.9	1.905
640	5.93	34.47	0.19	3.6	2000	2.13	34.65	2.06	(3.8)	27.71	39.5	2.179
800	5.04	34.51	0.42	3.6	2500	1.77	34.67	2.53	(3.7)	27.74	36.5	2.420
1035	4.14	34.54	0.61	3.7	3000	1.54	34.69	2.93	(3.5)	27.78	32.2	2.642
1269	3.40	34.60	0.97	3.9								
1599	2.68	34.62	1.65	3.7r								
1976	2.15	34.65	2.05	3.8u								
2354	1.86	34.66	2.42	3.5u								
2825	1.62	34.69	2.81	3.4u								
3303	1.50	34.69	3.17	3.4								
3789	1.51	34.71	3.26	3.6u								

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

150 SPENCER F. BAIRD; September 9, 1955; 1141 GCT; 19°57.5'N, 129°44'W; sounding, 2000 fm; wind, 020°, force 4; weather, sky obscured; sea, rough; wire angle, 21°.

0	22.57	34.85	5.09	0.7	0	22.57	34.85	5.09	0.7	23.97	395.2	0.000
10	22.58	34.83	5.04	0.6	10	22.58	34.83	5.04	0.6	23.95	397.0	0.040
23	22.61	34.83	5.11	0.6	20	22.60	34.83	5.10	0.6	23.94	397.5	0.079
51	21.48	34.61	5.25	0.7	30	22.57	34.81	5.16	0.6	23.93	398.3	0.119
65	20.24	34.43	5.48	0.7	50	21.60	34.63	5.23	0.7	24.07	385.1	0.198
79	19.86	34.43	5.48	0.7	75	19.94	34.42	5.48	0.7	24.35	358.1	0.291
101	19.38	34.47	5.32	0.7	100	19.39	34.47	5.32	0.7	24.54	340.8	0.380
123	18.40	34.41	5.26	0.6	150	14.20	33.94	4.62	1.2	25.35	263.7	0.533
148	14.41	33.95	4.65	1.2	200	10.48	33.85	4.14	1.8	26.00	201.8	0.651
196	10.68	33.85	4.20	1.8	250	8.88	34.01	3.45	2.3	26.39	164.5	0.745
258	8.77	34.04	3.32	2.4	300	8.38	34.23	1.34	2.8	26.63	141.3	0.824
350	8.01	34.31	1.05	3.3a)	400	7.45	34.32	1.13	3.6	26.84	121.8	0.962
464	6.64	34.37	1.27	3.8u	500	6.40	34.41	1.05	3.8	27.06	101.4	1.080
619	5.84	34.47	0.32	3.9u	600	5.93	34.47	0.34	3.9	27.16	91.2	1.184
832	4.83	34.52	0.45	3.9u	700	5.48	34.49	0.34	3.9	27.24	84.0	1.280
1077	3.88	34.56	0.75	4.0u	800	4.98	34.51	0.42	3.9	27.31	76.9	1.370
1385	3.14	34.61	1.20	3.9u	1000	4.13	34.55	0.65	4.0	27.44	65.2	1.531
					1200	3.55	34.58	0.93	4.0	27.52	57.2	1.672

151 SPENCER F. BAIRD; September 8, 1955; 1205, 1440 GCT; 20°00'N, 132°45.5'W; sounding, 2000 fm; wind, 020°, force 4; weather, cloudy; sea, moderate; wire angle, 33°, 19°.

0	22.5	34.81	5.05	0.7	0	22.5	34.81	5.05	0.7	23.95	396.5	0.000
8	22.54	34.81	5.02	0.6	10	22.53	34.82	5.02	0.6	23.95	396.8	0.040
21	22.46	34.82	5.03	0.7	20	22.45	34.82	5.03	0.7	23.97	394.5	0.079
45	21.60	34.72	5.12	0.7	30	22.24	34.79	5.04	0.7	24.02	390.4	0.119
53	20.82	34.67	5.31	0.7	50	21.08	34.68	5.25	0.7	24.25	367.9	0.195
61	20.30	34.61	5.34	0.7	75	19.95	34.68	5.40	0.7	24.54	340.0	0.284
73	20.00	34.67	5.41	0.7	100	19.13	34.67	5.30	0.7	24.76	319.8	0.367
87	19.42	34.68	5.31	0.7	150	16.00	34.20	4.81	0.9	25.15	282.0	0.520
104p	19.02	34.61r	5.23r	0.7	200	(12.20)	(34.02)	(3.91)	1.9	(25.81)	(219.2)	(0.647)
105	19.00	34.67	5.28	0.7	250	(10.26)	(34.11)	(3.00)	2.5	(26.23)	(179.5)	(0.750)
127	17.94	34.50	5.10	0.7	300	(8.70)	(34.21)	(1.88)	3.0	(26.57)	(147.3)	(0.834)
169	14.43	34.04	4.57	1.2	400	7.34	34.32	0.91	3.4	26.86	120.4	(0.974)
367p	7.67	34.29	1.20	3.3	500	6.54	34.38	0.47	3.5	27.01	105.3	(1.094)
557p	6.38u	34.47r	0.43	3.9r	600	5.98	34.44	0.38	3.6	27.14	93.4	(1.201)
					700	5.46	34.48	0.41	3.7	27.23	85.2	(1.298)
0	22.45u	34.79u	5.03u	0.7	800	4.95	34.50	0.48	3.7	27.31	77.3	(1.388)
8	22.46u	34.81	4.95u	0.7u	1000	4.23	34.53	0.66	3.7	27.41	67.8	(1.552)
468	6.73	34.36	0.50	3.5	1200	3.60	34.58	0.95	3.7	27.51	58.0	(1.697)
630	5.83	34.45	0.36	3.6	1500	2.93	34.61	1.35	3.8	27.60	50.1	(1.890)
785	5.00	34.50	0.47	3.7	2000	2.17	34.66	2.08		27.71	39.8	(2.164)
965	4.35	34.52	0.62	3.6u								
1147	3.74	34.57	0.85	3.7								
1396	3.14	34.60	1.17	3.6								
1644	2.66	34.61	1.54	3.7u								
1920	2.24	34.65	1.95	3.3								
2302	1.90	34.66	2.36	3.3u								

a) Alternate value, 3.8 μg at/L, not used in interpolation.

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

SPENCER F. BAIRD; September 7, 1955; 1752 GCT; 20°03.5'N, 135°32'W; sounding, 2000 fm; wind, 030°, force 2; weather, partly cloudy; sea, moderate; wire angle, 24°. 152

0	22.27	34.77	5.19	1.1	0	22.27	34.77	5.19	1.1	23.98	393.5	0.000
9	22.24	34.76	5.21	0.6	10	22.25	34.76	5.21	0.6	23.98	393.4	0.039
23	22.24	34.74	5.35	0.6	20	22.25	34.74	5.33	0.6	23.97	394.7	0.079
51	21.81	34.73	5.34	0.6	30	22.13	34.74	5.37	0.6	24.01	391.4	0.118
63	21.72	34.77	5.08	0.6	50	21.82	34.73	5.32	0.6	24.08	384.0	0.196
77	21.16	34.77	5.30	0.6	75	21.20	34.77	5.28	0.6	24.29	364.7	0.290
99	19.75	34.66	5.39	0.6	100	19.72	34.66	5.38	0.6	24.59	335.8	0.378
120	19.45	34.69	4.65	0.6	150	18.56	34.58	5.02	0.6	24.83	312.7	0.543
146	18.86	34.62	5.02	0.6	200	14.09	34.09	4.25	1.2	25.49	250.1	0.686
192	14.56	34.07	4.39	1.1	250	11.49	34.18	2.71	2.2	26.07	195.3	0.800
252	11.20	34.18	2.63	2.3	300	9.59	34.17	2.51	2.6	26.40	163.9	0.893
341	8.49	34.16	2.35	2.7	400	7.78	34.27	1.47	3.1	26.76	129.9	1.047
451	7.21	34.32	0.74	3.3u	500	6.76	34.34	0.74	3.4	26.96	110.6	1.174
603	5.89	34.40	0.80	3.2u	600	5.94	34.40	0.80	3.6	27.11	96.0	1.286
807	4.92	34.47	0.56	3.9	700	5.37	34.43	0.57	3.8	27.21	86.8	1.386
1044	3.96	34.56	0.79	3.9	800	4.94	34.46	0.56	3.9	27.28	80.3	1.479
1343	3.20	34.57	1.20	3.8	1000	4.13	34.54	0.73	3.9	27.44	65.2	1.644
					1200	3.54	34.56	1.03	3.9	27.51	58.2	1.787

SPENCER F. BAIRD; September 6, 1955; 2052, 2308 GCT; 20°07'N, 138°22.5'W; sounding, 2800 fm; wind, 065°, force 1; weather, partly cloudy; sea, moderate; wire angle, 00°, 00°. 153

0	23.24	34.74	4.98	0.6	0	23.24	34.74	4.98	0.6	23.69	421.8	0.000
10	23.00	34.74	4.92	0.7	10	23.00	34.74	4.92	0.7	23.76	414.9	0.042
25	22.98	34.75	4.94	0.7	20	22.98	34.75	4.93	0.7	23.77	413.8	0.083
55	22.95	34.76	4.98	0.7	30	22.98	34.75	4.94	0.7	23.78	413.1	0.125
65	22.92	34.76	4.94	0.7	50	22.95	34.76	4.98	0.7	23.79	412.1	0.208
75	21.70	34.68	5.14	0.6	75	21.70	34.68	5.14	0.6	24.08	384.6	0.308
90	20.56	34.69	5.09	0.7	100	20.00	34.70	5.07	0.7	24.55	339.8	0.399
109	19.62	34.72	5.01	0.7	150	18.40	34.76	4.89	0.8	25.01	295.3	0.560
132	19.32	34.87	5.09	0.6	200	13.69	34.12	4.07	1.4	25.60	240.0	0.697
161	17.52	34.62	4.51	1.0	250	11.02	34.12	4.16	2.0	26.10	191.8	0.807
210	13.07	34.10	4.05	1.5	300	9.43	34.14	4.20	2.4	26.40	163.9	0.899
290	9.68	34.14	4.26	2.3	400	7.51	34.22	1.45	3.0	26.75	130.0	1.052
395	7.58	34.21	1.60	3.2r	500	6.60	34.32	0.69	3.3	26.96	110.5	1.179
534	6.13	34.35	0.52	3.8r	600	5.75	34.38	0.48	3.6	27.12	95.2	1.289
721	5.10	34.46	0.52	4.0r	700	5.22	34.44	0.49	3.6	27.23	84.9	1.387
					800	4.85	34.49	0.57	3.6	27.31	77.3	1.477
0	23.56u	34.74	4.89u	0.6	1000	4.10	34.53	0.78	3.6	27.43	66.2	1.638
10	23.04u	34.74	4.92	0.6u	1200	3.26	34.60	1.15	3.6	27.57	52.8	1.776
492	6.66	34.31	0.71	3.3	1500	2.79	34.64	1.64	3.5	27.64	46.0	1.952
659	5.45	34.42	0.47	3.6	2000	2.10	34.65	2.20	3.4	27.71	39.7	2.215
818	4.80	34.50	0.58	3.6	2500	1.75	34.67	2.64	3.3	27.74	36.4	2.454
1053	3.87	34.54	0.86	3.6	3000	1.58	34.68	2.95	3.2	27.77	33.3	2.678
1190	3.28	34.60	1.14	3.6	4000	1.45	34.70			27.79	31.2	3.114
1620	2.62	34.65u	1.60	3.5								
2004	2.09	34.65	2.20	3.4								
2389	1.82	34.67	2.55	3.4u								
2873	1.62	34.67	2.87	3.3								
3353	1.52	34.70	3.13	3.2								
3835	1.46	34.63r	2.88	3.1								
4324	1.44	34.70	3.71r	-								

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SPENCER F. BAIRD; September 6, 1955; 0223 GCT; 20°01'N, 141°16.5'W; sounding, 2000 fm; wind, 005°, force 2; weather, cloudy; sea, moderate; wire angle, 14°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	23.25	34.76	5.04	0.7	0	23.25	34.76	5.04	0.7	23.70	420.8	0.000
10	23.09	34.76	5.01	0.6	10	23.09	34.76	5.01	0.6	23.75	416.0	0.042
24	23.03	34.76	5.03	0.6	20	23.03	34.76	5.02	0.6	23.76	414.8	0.083
53	23.01	34.73	5.04	0.6	30	23.02	34.75	5.03	0.6	23.76	414.8	0.125
68	22.69	34.70	5.08	0.6	50	23.01	34.74	5.03	0.6	23.75	415.8	0.208
82	20.02	34.52	5.15	0.7	75	21.10	34.59	5.14	0.6	24.17	375.3	0.308
106	17.88	34.38	4.48	1.0	100	18.26	34.40	4.62	0.9	24.77	318.2	0.395
129	16.23	34.29	4.01	1.2	150	14.67	34.18	3.69	1.4	25.43	255.3	0.541
156	14.26	34.16	3.60	1.5	200	11.79	34.14	3.10	2.1	25.98	203.0	0.658
207	11.48	34.14	3.10	2.1	250	9.71	34.12	3.62	2.1	26.33	170.0	0.753
273	9.04	34.11	3.75	2.1	300	8.73	34.25	3.32	3.2	26.60	144.6	0.835
369	8.30	34.40	0.86	3.2u	400	8.01	34.39	0.72	3.3	26.82	123.9	0.976
489	6.68	34.38	0.54	3.6u	500	6.59	34.39	0.51	3.6	27.02	104.9	1.098
653	5.82	34.49	0.46	3.8u	600	6.07	34.46	0.46	3.7	27.14	93.0	1.205
873	4.76	34.52	0.64	4.0u	700	5.57	34.50	0.50	3.9	27.23	85.1	1.303
1122	3.99	34.58	0.90	4.0u	800	5.08	34.51	0.55	3.9	27.29	79.3	1.394
1426	3.19	34.60	1.26	4.0u	1000	4.33	34.55	0.78	4.0	27.42	67.3	1.559
					1200	3.78	34.59	1.00	4.0	27.50	58.9	1.706

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SPENCER F. BAIRD; September 5, 1955; 0323, 0456 GCT; 19°57.5'N, 144°15'W; sounding, 2000 fm; wind, 040°, force 3; weather, overcast; sea, moderate; wire angle, 18°, 30°.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m
0	23.55	34.73	4.92	0.6	0	23.55	34.73	4.92	0.6	23.59	431.0	0.000
10	23.48	34.75	4.93	0.6	10	23.48	34.75	4.93	0.6	23.62	427.8	0.043
24	23.40	34.71	4.89	0.6	20	23.42	34.72	4.90	0.6	23.62	427.9	0.086
53	23.40	34.74	4.92	0.6	30	23.40	34.72	4.90	0.6	23.63	427.3	0.129
62	23.41	34.70	4.91	0.6	50	23.40	34.74	4.92	0.6	23.64	426.2	0.214
72	23.44	34.71	4.86	0.6	75	23.41	34.72	4.86	0.6	23.62	427.9	0.322
85	23.34	34.73	4.89	0.6	100	22.92	34.76	4.88	0.6	23.80	410.8	0.427
104	22.87	34.76	4.88	0.6	150	15.30	34.21	3.16	1.7	25.32	266.2	0.599
127	18.58	34.28	3.60	1.4	200	11.93	34.22	2.40	2.2	26.02	199.8	0.718
154	14.92	34.21	3.15	1.7	250	9.80	34.23	2.40	2.5	26.40	163.3	0.811
204	11.72	34.22	2.39	2.2	300	8.67	34.26	1.64	2.8	26.61	143.3	0.890
272	9.18	34.23	2.41	2.6	400	7.79	34.35	0.80	3.1	26.82	123.8	1.030
366	8.20u	34.34u	0.97u	3.2r	500	6.75	34.41	0.53	3.3	27.01	105.5	1.153
493	6.80	34.41	0.52	3.6r	600	6.24	34.45	0.51	3.4	27.11	96.1	1.261
676	5.60	34.50	0.40	3.9r	700	5.48	34.51	0.45	3.5	27.25	82.7	1.359
					800	5.05	34.52	0.56	3.7	27.30	77.6	1.448
0	23.52u	34.74u	4.90u	0.7u	1000	4.26	34.53	0.88	3.7	27.41	67.9	1.612
9	23.53u	34.76u	4.82u	0.6	1200	3.60	34.56	1.14	3.7	27.50	59.5	1.759
429	7.38u	34.37u	0.71u	3.2	1500	2.86	34.62	1.50	3.7	27.62	48.2	1.951
578	6.40	34.44	0.52	3.4a)	2000	2.15	34.65	2.02	3.4	27.70	40.1	2.220
720	5.39	34.51	0.48	3.5								
891	4.69	34.52	0.66	3.7								
1059	4.04	34.54	0.96	3.7								
1292	3.34	34.59	1.24	3.6								
1531	2.80	34.62	1.57	3.6u								
1799	2.38	34.64	1.85	3.4b)								
2170	1.97	34.65	2.29	-								

a) Mean value of 3.2 and 3.5 μg at/L.

b) Alternate value, 3.0 μg at/L, not used in interpolation.

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

SPENCER F. BAIRD; September 4, 1955; 0749 GCT; 20°02'N, 147°08'W; sounding, 2000 fm; wind, 065°, force 3; weather, partly cloudy; sea, moderate; wire angle, 22°. 156

0	23.86	34.84	4.91	0.5	0	23.86	34.84	4.91	0.5	23.58	431.8	0.000
9	23.85	34.81	4.95	0.6	10	23.85	34.82	4.95	0.6	23.56	433.8	0.043
22	23.85	34.83	4.98	0.6	20	23.85	34.83	4.98	0.6	23.57	432.7	0.087
49	23.79	34.85	4.90	0.6	30	23.81	34.84	4.95	0.6	23.59	430.8	0.130
62	23.80	34.83	4.89	0.6	50	23.80	34.85	4.90	0.6	23.61	428.8	0.216
75	23.75	34.79	4.93	0.6	75	23.75	34.79	4.93	0.6	23.57	432.8	0.324
96	21.84	34.94	5.19	0.5	100	21.40	34.92	5.15	0.5	24.34	359.3	0.424
118	20.28	34.82	4.99	0.6	150	19.00	34.82	4.50	0.7	24.91	305.5	0.593
143	19.44	34.87	4.79	0.7	200	14.72	34.34	4.21	1.0	25.54	245.7	0.733
189	16.76	34.58	4.30	0.9	250	11.39	34.13	4.07	1.6	26.05	197.1	0.846
250	11.39	34.13	4.07	1.6	300	9.74	34.14	3.50	2.1	26.34	169.0	0.941
342	8.67	34.18	2.90	2.5	400	7.70	34.23	2.00	2.9	26.73	131.9	1.098
454	7.12	34.27	1.16	3.2	500	6.72	34.32	0.81	3.3	26.94	112.2	1.227
608	5.92	34.58	0.65	3.6	600	5.97	34.58	0.67	3.6	27.25	82.9	1.332
815	4.84	34.49	0.76	3.7	700	5.41	34.55	0.70	3.7	27.29	79.0	1.421
1061	3.94	34.54	1.05	3.7	800	4.90	34.51	0.76	3.7	27.32	75.9	1.507
1354	3.20	34.54	1.35	3.8	1000	4.13	34.54	0.98	3.7	27.43	66.1	1.668
					1200	3.57	34.54	1.17	3.7	27.49	60.2	1.814

SPENCER F. BAIRD; September 3, 1955; 0546, 0740 GCT; 20°03'N, 150°01.5'W; sounding, 2850 fm; wind, 075°, force 3; weather, cloudy; sea, moderate; wire angle, 25°, 26°. 157

0	24.35	34.74	4.82	0.5	0	24.35	34.74	4.82	0.5	23.36	453.2	0.000
9	24.32	34.74	4.86	0.5	10	24.35	34.74	4.86	0.5	23.37	452.2	0.045
23	24.32	34.74	4.83	0.5	20	24.34	34.74	4.84	0.5	23.37	452.2	0.091
51	24.26	34.70	4.85	0.5	30	24.33	34.73	4.84	0.5	23.37	452.2	0.136
60	24.26	34.72	4.85	0.5	50	24.25	34.70	4.85	0.5	23.36	453.5	0.227
69	24.28	34.73	4.84	0.6	75	24.28	34.72	4.85	0.5	23.37	451.8	0.340
83	24.26	34.72	4.88	0.6	100	23.80	34.68	4.92	0.5	23.48	441.5	0.453
100	23.80	34.68	4.92	0.5	150	16.40	34.33	4.00	1.1	25.16	281.8	0.636
123	19.42	34.44	4.69	0.8	200	12.59	34.14	3.30	1.8	25.83	217.8	0.763
148	16.66	34.34	4.03	1.1	250	10.20	34.21	2.99	2.3	26.32	170.8	0.863
194	12.97	34.13	3.35	1.7	300	8.57	34.13	2.80	2.5	26.53	151.2	0.946
257	9.96	34.21	2.95	2.3	400	6.60	34.16	1.37	3.0	26.83	122.7	1.088
344	7.26	34.08	2.57	2.7	500	5.90	34.30	0.75	3.3	27.03	103.6	1.207
464	6.30u	34.33u	0.77	3.5r	600	5.20	34.37	0.67	3.5	27.17	90.1	1.311
656	4.95	34.42	0.76	3.9r	700	4.82	34.46	0.81	3.5	27.29	79.5	1.403
					800	4.52	34.51	0.86	3.5	27.37	71.4	1.486
0	24.30u	34.72u	4.83u	0.5	1000	3.94	34.56	1.03	3.5	27.46	63.4	1.638
9	24.31u	34.74	4.89u	0.5	1200	3.38	34.59	1.43	3.5	27.54	55.4	1.775
439	6.14u	34.17u	1.13u	3.2	1500	2.73	34.61	1.85	3.5	27.62	47.8	1.958
591	5.25	34.36	0.65	3.5	2000	2.08	34.66	2.32	3.4	27.72	38.2	2.220
736	4.71	34.49	0.82	3.5	2500	1.77	34.71	2.60	3.4	27.78	32.2	2.444
951	4.08	34.55	0.99	3.5	3000	1.62	34.72	3.10	3.3	27.79	31.2	2.653
1164	3.47	34.58	1.91u	3.8r								
1460	2.79	34.51	1.86	3.2r								
1799	2.28	34.63	2.18	3.5								
2138	1.96	34.69	2.38	3.4								
2560	1.75	34.71	2.65	3.4u								
2980	1.62	34.72	3.10	3.5r								
3416	1.52	34.71	3.16	3.3								
3884	1.48	34.71	3.36	3.2								

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

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SPENCER F. BAIRD; September 2, 1955; 0641, 0458 GCT; 20°06.5'N, 153°06'W; sounding, 2000 fm; wind, 070°, force 4; weather, partly cloudy; sea, moderate; wire angle, 20°, 27°.

0	24.16	34.92	4.92	0.4	0	24.16	34.92	4.92	0.4	23.55	434.5	0.000
9	24.15	34.88	4.95	0.5	10	24.14	34.88	4.95	0.4	23.53	437.0	0.044
24	24.12	34.90	4.97	0.4	20	24.13	34.89	4.96	0.4	23.54	435.4	0.087
57	24.10	34.90	4.92	0.4	30	24.12	34.89	4.95	0.4	23.54	435.4	0.131
60	24.10	34.88	4.98	0.4	50	24.10	34.90	4.92	0.4	23.55	434.7	0.218
69	24.11	34.88	4.98	0.4	75	24.00	34.88	5.00	0.4	23.58	432.4	0.327
84	22.70	34.94	5.26	0.4	100	22.15	35.07	5.00	0.4	24.25	368.0	0.428
101	22.12	35.07	5.00	0.4	150	21.26	35.25	4.83	0.4	24.63	331.5	0.605
123	21.65	35.20	4.99	0.4	200	19.22	35.02	4.63	0.5	25.00	296.7	0.766
149	21.28	35.25	4.84	0.4	250	15.41	34.44	4.37	0.9	25.47	252.0	0.906
196	19.58	35.08	4.65	0.5	300	12.40	34.23	4.02	1.3	25.93	207.9	1.025
265	14.64	34.37	4.28	1.0	400	8.02	34.11	3.42	2.3	26.59	145.3	1.209
362	9.16	34.13	3.72	2.0	500	6.22	34.18	1.35	3.1	26.90	116.3	1.346
492	6.36	34.17	1.52	3.0	600	5.62	34.33	0.73	3.3	27.10	97.4	1.460
673	5.40	34.44	0.63	3.4	700	5.27	34.46	0.63	3.4	27.23	84.7	1.559
					800	4.75	34.50	0.76	3.5	27.33	75.4	1.647
0	24.18u	34.90u	5.15u	0.4	1000	4.03	34.53	1.02	3.5	27.43	66.0	1.806
9	24.18u	34.92u	5.07u	0.4u	1200	3.42	34.57	1.30	3.4	27.53	56.8	1.948
452	6.97	34.11	2.51	2.7	1500	2.77	34.60	1.70	3.4	27.61	58.9	2.135
611	5.58	34.36	0.70	3.3	2000	2.13	34.63	2.24	3.3	27.69	41.2	2.411
760	4.90	34.49	0.71	3.5								
937	4.27	34.52	0.94	3.5								
1114	3.64	34.56	1.18	3.4u								
1360	3.06	34.59	1.45	3.4								
1610	2.58	34.61	1.76	3.4								
1886	2.26	34.61	2.13	3.3								
2266	1.88	34.66	2.49	3.3u								

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SPENCER F. BAIRD; September 15, 1955; 2113 GCT; 23°14.5'N, 111°01.5'W; sounding, 640 fm; wind, 160°, force 1; weather, cloudy; sea, slight; wire angle, 03°.

0	27.88	34.64	4.76	0.9	0	27.88	34.64	4.76	0.9	22.18	565.7	0.000
10	26.16	34.60	5.08	1.0	10	26.16	34.60	5.08	1.0	22.70	515.9	0.054
15	24.09	34.61	5.13	1.1	20	22.59	34.55	5.03	1.1	23.73	417.5	0.101
20	22.59	34.55	5.03	1.1	30	20.73	34.60	4.24	1.6	24.29	364.7	0.140
30	20.73	34.60	4.24	1.6	50	16.99	34.04	4.05	1.7	24.80	315.3	0.208
40	19.20	34.51	4.14	1.7	75	14.15	34.09	2.57	2.3	25.48	251.2	0.280
50	16.99	34.04	4.05	1.7	100	13.42	34.33	1.55	2.7	25.81	219.9	0.339
65	15.41	34.30	2.38	2.3	150	12.10	34.63	0.50	3.1	26.30	172.8	0.439
81	13.50	34.02	2.60	2.3	200	10.94	34.56	0.59	3.2	26.47	157.1	0.524
101	13.42	34.34	1.55	2.7	250	10.92	34.70	0.14	3.4	26.57	147.2	0.602
115	12.52	34.54	0.73	3.0	300	10.31	34.68	0.11	3.5	26.67	138.0	0.677
153	12.06	34.63	0.49	3.1	400	8.55	34.54	0.13	3.7	26.86	120.3	0.813
199	10.94	34.56	0.60	3.2	500	7.30	34.51	0.14	3.8	27.01	105.3	0.934
263	10.82	34.71	0.11	3.4u	600	6.25	34.51	0.18	3.9	27.15	92.6	1.041
351	9.36	34.59	0.14	3.6u								
478	7.52	34.51	0.14	3.8u								
656	5.73	34.51	0.23	4.0u								

OBSERVED					INTERPOLATED					COMPUTED			
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m	

SPENCER F. BAIRD; September 15, 1955; 1405 GCT; 22°44.5'N, 111°57'W; sounding, 1800 fm; wind, 150°, force 1; weather, rain; sea, slight; wire angle, 06°. 159

0	27.56	34.10	4.60	0.7	0	27.56	34.10	4.60	0.7	21.88	594.2	0.000	
10	27.56	34.20	4.63	0.7	10	27.56	34.20	4.63	0.7	21.96	587.0	0.059	
25	20.52	33.91	6.12	0.8	20	24.00	34.03	5.45	0.7	22.93	493.9	0.113	
55	13.76	34.05	2.79	2.2	30	19.20	33.92	5.67	0.9	24.17	375.9	0.157	
70	13.30	34.30	1.50	2.7	50	14.74	34.01	3.33	1.7	25.29	269.2	0.222	
85	13.26	-	0.92	2.9	75	13.30	34.37	1.40	2.7	25.87	213.9	0.283	
108	12.04	34.51	0.75	3.0	100	12.58	34.56	0.62	3.0	26.15	187.1	0.333	
137	11.48	34.54	0.98	3.0	150	11.45	34.64	0.55	3.0	26.43	161.2	0.422	
161	11.47	34.69	0.36	3.1	200	11.07	34.71	0.16	3.2	26.56	148.1	0.501	
212	10.90	34.71	0.16	3.3u	250	10.35	34.68	0.27	3.4	26.66	138.6	0.575	
279	9.93	34.66	0.34	3.4u	300	9.65	34.65	0.30	3.4	26.76	129.5	0.646	
380	8.46	34.60	0.14	3.5u	400	8.19	34.59	0.14	3.5	26.94	112.0	0.773	
503	7.06	34.54	0.11	3.7u	500	7.08	34.54	0.13	3.7	27.07	100.2	0.887	
669	5.76	34.52	0.17	3.9u	600	6.25	34.52	0.15	3.8	27.16	91.5	0.991	
774p	5.00	34.53	0.23	4.1r	700	5.52	34.52	0.17	3.9	27.26	82.1	1.087	
894	4.54	34.52	0.56	4.2u	800	4.88	34.53	0.31	4.0	27.33	75.0	1.174	
1150	3.76	34.61	0.60	4.2u	1000	4.20	34.54	0.60	4.1	27.42	67.2	1.336	

SPENCER F. BAIRD; September 15, 1955; 0254, 0427 GCT; 22°03.5'N, 113°12'W; sounding, 2000 fm; wind, calm; weather, clear; sea, slight; wire angle, 02°, 00°. 160

0	26.99	33.80	4.85	0.6	0	26.99	33.80	4.85	0.6	21.84	598.1	0.000	
10	26.20	33.78	4.77	0.6	10	26.20	33.78	4.77	0.6	22.07	576.0	0.059	
26	21.22	33.75	4.79	0.6	20	22.58	33.76	4.69	0.6	23.13	475.2	0.111	
56	17.32	33.66	5.94	0.7	30	20.44	33.75	4.95	0.6	23.71	419.5	0.156	
66	15.32	33.47	6.01	0.7	50	17.86	33.69	5.79	0.7	24.32	361.0	0.234	
76	14.25	33.40	5.91	0.7	75	14.25	33.40	5.93	0.7	24.92	304.4	0.318	
90	13.10	33.62	4.29	1.5	100	12.14	33.67	3.21	1.7	25.55	244.2	0.387	
109	11.64	33.77	3.01	1.9	150	11.59	34.28	1.65	2.8	26.13	189.6	0.497	
134	11.50	34.18	1.90	2.7a)	200	12.00	34.77	0.22	3.3	26.43	160.5	0.587	
163	12.18	34.68	0.44	3.2	250	11.10	34.73	0.14	3.3	26.57	147.8	0.667	
219	11.61	34.74	0.19	3.3	300	10.40	34.69	0.13	3.3	26.66	138.5	0.741	
291	10.54	34.70	0.13	3.4u	400	8.99	34.61	0.14	3.4	26.84	122.2	0.879	
394	9.04	34.61	0.15	3.6r	500	7.82	34.57	0.16	3.4	26.98	108.3	1.003	
533	7.20	34.53	0.15	3.9r	600	6.65	34.52	0.16	3.5	27.11	96.2	1.114	
723	5.76	34.52	0.19	4.0r	700	5.93	34.52	0.19	3.5	27.21	87.2	1.214	
					800	5.34	34.52	0.21	3.5	27.28	80.2	1.308	
0	26.95u	33.80	4.77u	0.6	1000	4.39	34.57	0.44	3.6	27.43	66.1	1.474	
10	26.11u	33.78	4.78u	0.6	1200	3.77	34.58	0.65	3.6	27.50	59.2	1.621	
499	7.84	34.57	0.16	3.4	1500	2.95	34.63	1.21	3.5	27.62	48.2	1.814	
668	6.14	34.52	0.18	3.5	2000	2.12	34.70	2.09	3.2	27.74	36.2	2.078	
829	5.18	34.52	0.25	3.5									
1019	4.33	34.57	0.47	3.6									
1209	3.74	34.58	0.65	3.5									
1470	3.02	34.62	1.13	3.5									
1734	2.52	34.65	1.59	3.4									
2022	2.10	34.70	2.06	3.2									
2414	1.85	34.70	2.52	3.1									

a) Alternate value, 3.1 μg at/L, not used in interpolation.

CCOFI

NORPAC

OBSERVED					INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	μg at/L	m	°C	‰	ml/L	μg at/L	g/L	$10^5 cm^3/g$	dyn. m

161

SPENCER F. BAIRD; September 14, 1955; 1706 GCT; 21°24'N, 114°26'W; sounding, 2100 fm; wind, 350°, force 1; weather, cloudy; sea, slight; wire angle, 09°.

0	26.60	34.18	4.72	0.7	0	26.60	34.18	4.72	0.7	22.25	559.2	0.000
10	25.80	34.18	4.85	0.7	10	25.80	34.18	4.85	0.6	22.50	535.2	0.055
25	19.01	33.61	5.87	0.6	20	20.20	33.65	5.75	0.6	23.70	420.2	0.103
55	14.67	33.68	5.14	1.1	30	17.95	33.62	5.81	0.6	24.26	367.4	0.142
69	13.51	33.91	3.32	2.0	50	15.19	33.67	5.24	0.9	24.92	303.9	0.210
84	13.08	34.16	1.93	2.5	75	13.57	34.06	2.60	2.3	25.57	242.0	0.278
109	12.58	34.43	1.03	2.8	100	12.75	34.29	1.31	2.7	25.91	209.9	0.335
133	11.94	34.59	0.47	3.1	150	11.65	34.62	0.40	3.1	26.38	165.2	0.431
160	11.56	34.66	0.36	3.1	200	11.32	34.71	0.21	3.2	26.51	152.8	0.513
212	11.23	34.72	0.16	3.2	250	10.61	34.68	0.19	3.3	26.61	143.3	0.589
276	10.22	34.66	0.23	3.3	300	9.88	34.65	0.30	3.3	26.72	133.7	0.661
375	8.96	34.60	0.44	3.4a)	400	8.63	34.58	0.40	3.4	26.87	119.5	0.794
497	7.50	34.52	0.15	3.6	500	7.46	34.52	0.15	3.5	27.00	106.9	0.915
660	6.08	34.51	0.19	3.5	600	6.58	34.51	0.17	3.5	27.12	95.2	1.025
879	4.78	34.52	0.38	3.8u	700	5.80	34.51	0.23	3.5	27.22	86.1	1.125
1128	3.91	34.56	0.55	3.6	800	5.16	34.51	0.31	3.5	27.29	79.1	1.217
1433	3.12	34.61	1.04	3.6	1000	4.33	34.54	0.44	3.6	27.41	67.5	1.383
					1200	3.71	34.57	0.63	3.6	27.49	59.8	1.530

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SPENCER F. BAIRD; September 14, 1955; 0004, 0145 GCT; 20°22'N, 116°19.5'W; sounding, 2000 fm; wind, 355°, force 1; weather, intermittent drizzle; sea, slight; wire angle, 16°, 15°.

0	25.3	34.40	4.84	0.6	0	25.3	34.40	4.84	0.6	22.82	505.0	0.000
9	24.88	34.43	4.83	0.6	10	24.87	34.43	4.83	0.6	22.97	490.1	0.050
25	24.45	34.45	4.85	0.6	20	24.60	34.45	4.82	0.6	23.07	481.0	0.098
55	19.94	34.09	5.49	0.6	30	24.03	34.45	4.89	0.6	23.24	464.9	0.146
64	18.60	33.94	5.61	0.6	50	21.20	34.23	5.32	0.6	23.87	403.9	0.233
74	17.75	33.86	5.58	0.6	75	17.70	33.85	5.58	0.6	24.49	344.9	0.327
88	14.99	33.60	5.27	0.8	100	13.25	33.57	4.80	1.2	25.26	272.2	0.405
106	12.62	33.57	4.37	1.4	150	12.92	34.59	0.60	2.9	26.11	191.2	0.522
131	13.00	34.14	2.16	2.4	200	11.67	34.67	0.42	3.0	26.42	162.1	0.613
157	12.83	34.70	0.52	3.1r	250	10.80	34.68	0.32	3.0	26.58	146.5	0.693
207	11.54	34.67	0.44	3.2r	300	10.00	34.67	0.21	3.1	26.71	133.8	0.766
278	10.35	34.69	0.25	3.3r	400	8.47	34.56	0.21	3.2	26.88	118.1	0.899
377	8.80	34.58	0.21	3.5r	500	7.20	34.53	0.22	3.4	27.04	102.8	1.017
511	7.08	34.53	0.19	3.8r	600	6.53	34.55	0.17	3.5	27.15	92.1	1.123
695	5.90	34.53	0.19	4.0r	700	5.88	34.53	0.18	3.5	27.22	85.4	1.220
					800	5.18	34.53	0.22	3.6	27.30	77.9	1.312
0	25.28u	34.45u	4.76u	0.6	1000	4.32	34.58	0.43	3.5	27.44	64.6	1.473
10	24.91u	34.43u	4.78u	0.5u	1200	3.69	34.58	0.68	3.4	27.51	58.2	1.616
473	7.56	34.52	0.26	3.3	1500	2.93	34.63	1.27	3.2	27.63	47.2	1.805
639	6.30	34.55	0.16	3.5	2000	2.16	34.69	2.00	3.0	27.74	37.0	2.068
798	5.20	34.53	0.23	3.6	2500	1.82	34.70	2.61	2.9	27.77	33.7	2.295
1028	4.21	34.58	0.45	3.5								
1262	3.52	34.58	0.78	3.5u								
1587	2.74	34.64	1.40	3.2								
1614p	2.62u	34.63u	1.51u	3.0u								
1964	2.18	34.69	1.98	3.0u								
2344	1.91	34.69	2.39	2.9u								
2824	1.69	34.70	2.73	3.2								

a) Mean value of 3.2 and 3.6 μg at/L.

OBSERVATIONS OF THE FACULTY OF FISHERIES, HOKKAIDO UNIVERSITY

OSHORO MARU; June 26, 1955; 0920-1130 GCT; 51°43'N, 160°30'E; 02 02 44 046 02 x x 00 x x 1 15-00 5 xx xx 1 2 x. 1

OBSERVED Z m	W ⚹°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	pH	INTERPOLATED Z m	T °C	S ‰	COMPUTED σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		6.0	32.47		1.25	0	8.50	0	6.0	32.47	25.58	242	0.000
10	0	5.18	32.54		0.45	30	8.50	10	5.18	32.54	25.73	227	0.023
25	0	3.01	33.08		1.25	0	8.30	25	3.01	33.08	26.38	166	0.053
50	0	-0.57	33.03		1.05	15	8.40	50	-0.57	33.03	26.56	149	0.092
75	0	-0.64	33.15		2.15	65	8.25	75	-0.64	33.15	26.67	138	0.128
100	0	-0.34	33.21		2.10	65	8.15	100	-0.34	33.21	26.69	136	0.162
150	0	0.35	33.33		1.30	35	8.00	150	0.35	33.33	26.76	130	0.229
200	0	0.63	33.44		2.10	65	7.90	200	0.63	33.44	26.84	122	0.292
295	0	2.91	33.75		2.70	95	7.90	300	2.95	33.77	26.93	114	0.411
393	0	3.40	33.91		3.15	100	7.90	400	3.41	33.91	27.00	107	0.524
488	0	3.50	34.07		3.05	110	7.90	500	3.51	34.09	27.13	95	0.628
583	0	3.46	34.16		3.15	145	8.00	600	3.42	34.18	27.22	86	0.722
780	3	3.07	34.36		3.15	140	7.90	800	3.03	34.36	27.39	70	0.888
970	3	2.86	34.36		2.70	180	7.90	1000	2.85	34.38	27.43	66	1.036
1151	3	2.83	34.49		2.25	180	7.90	1200	2.80	34.51	27.53	57	1.173
1440	3	2.56	34.54		2.05	185	7.90	1500	(2.49)	(34.54)	(27.59)	(51)	(1.359)

OSHORO MARU; June 27, 1955; 0423-0630 GCT; 52°52'N, 161°50'E; 25 08 01 067 25 x x 00 x x 1 17-20 2 5469-1 xx 1 2 1. 2

0		6.4	33.24		1.15	50	8.40	0	6.4	33.24	26.13	188	0.000
10	14	6.17	33.17		1.90	0	8.00	10	6.17	33.17	26.11	191	0.019
24	14	4.38	33.15		1.05	5	8.40	25	4.29	33.15	26.31	172	0.046
49	14	2.85	33.17		0.40	30	8.20	50	2.76	33.17	26.47	157	0.087
73	14	0.97	33.30		2.00	55	8.10	75	0.96	33.30	26.70	135	0.124
91	25	0.96	33.37		1.70	60	8.20	100	0.98	33.39	26.78	128	0.157
118	37	1.00	33.42		2.20	45	8.15	150	2.30	33.64	26.88	118	0.219
158	37	2.58	33.69		2.30	85	8.20	200	3.20	33.84	26.96	111	0.277
220	43	3.32	33.89		2.50	90	8.20	300	3.38	34.02	27.09	98	0.383
294	43	3.37	34.04		2.50	95	8.10	400	3.22	34.25	27.29	80	0.474
369	43	3.28	34.22		2.60	105	8.00	500	3.09	34.36	27.39	70	0.552
448	43	3.16	34.29		1.75	120	7.90	600	2.88	34.45	27.48	62	0.621
620	43	2.86	34.47		2.35	95	7.90	800	2.61	34.49	27.53	57	0.748
803	49	2.60	34.49		2.25	120	7.90	1000	2.42	34.51	27.56	54	0.870
988	49	2.43	34.51		2.25	180	7.90	1200	2.28	34.51	27.58	52	0.988
1270	49	2.21	34.51		2.10	125	7.90						

OSHORO MARU; June 28, 1955; 0045-0300 GCT; 53°00'N, 164°00'E; 31 01 02 118 31 x x 22 x x 2 23-28 3 xx xx 1 2 1. 3

0		5.9	33.31	7.48	2.05	30	8.20	0	5.9	33.31	26.26	177	0.000
10	6	5.34	33.30	8.13	2.45	65	8.20	10	5.34	33.30	26.31	171	0.018
25	6	4.38	33.13	7.83	2.45	50	8.15	25	4.38	33.13	26.28	175	0.044
50	6	3.56	33.12	7.67	2.50	30	8.00	50	3.56	33.12	26.36	167	0.086
75	6	1.58	33.33	7.72	2.45	50	8.00	75	1.58	33.33	26.69	136	0.124
100	3	1.48	33.40	7.55	2.35	15	8.00	100	1.48	33.40	26.75	131	0.158
150	3	2.89	33.87	2.81	2.70	80	7.90	150	2.89	33.87	27.01	106	0.217
200	3	3.40	34.02	0.84	2.70	90	7.90	200	3.40	34.02	27.09	98	0.271
296	11	3.41	34.09	0.60	3.30	65	7.90	300	3.41	34.09	27.14	94	0.368
391	11	3.32	34.20	0.56	2.20	105	7.90	400	3.31	34.20	27.24	84	0.459
490	11	3.21	34.25	0.76	3.10	115	7.90	500	3.20	34.27	27.31	78	0.544
585	11	3.08	34.31	0.74	2.50	95	7.90	600	3.05	34.31	27.35	74	0.622
780	11	2.73	34.40	0.96	3.05	95	7.90	800	2.70	34.40	27.45	64	0.769
977	14	2.46	34.43	0.84	2.25	130	7.90	1000	2.44	34.45	27.51	59	0.902
1174	14	2.31	34.49	0.95	2.55	125	7.90	1200	2.29	34.49	27.56	54	1.023
1455	23	2.09	34.52	1.53	2.70	125	7.90	1500	(2.05)	(34.52)	(27.61)	(49)	(1.197)

FFHU

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
4	OSHORO MARU; June 28, 1955; 2024-2217 GCT; 53°01'N, 166°00'E; 16 02 45 046 16 x x 00 x x 1 14-08 4 xx xx 1 2 1.												
0		5.8	33.33		2.70	60	8.30	0	5.8	33.33	26.28	175	0.000
10	13	4.17	33.26		2.60	70	8.30	10	4.17	33.26	26.40	164	0.017
24	13	3.06	33.26		1.75	55	8.30	25	3.01	33.26	26.51	154	0.040
49	13	1.91	33.30		1.85	65	8.25	50	1.87	33.30	26.64	141	0.077
73	13	1.31	33.33		2.60	75	8.25	75	1.30	33.33	26.70	135	0.111
99	10	1.40	33.35		1.85	70	8.20	100	1.41	33.35	26.72	134	0.146
148	10	2.61	33.77		2.25	110	8.20	150	2.64	33.78	26.97	110	0.207
197	10	3.41	34.00		3.00	90	8.05	200	3.43	34.00	27.07	100	0.263
274	21	3.41	34.05		3.20	120	7.95	300	3.39	34.07	27.13	95	0.360
360	21	3.32	34.18		1.85	120	7.90	400	3.27	34.22	27.25	83	0.451
455	21	3.24	34.22		2.20	130	7.85	500	3.23	34.25	27.28	80	0.535
549	21	3.22	34.33		2.85	105	7.90	600	3.16	34.34	27.37	72	0.615
744	21	2.90	34.34		2.20	120	7.85	800	2.81	34.36	27.41	68	0.762
956	22	2.59	34.43		1.60	125	7.90	1000	2.55	34.45	27.51	58	0.899
1153	22	2.40	34.47		1.85	150	7.85	1200	2.37	34.49	27.55	55	1.021
1447	24	2.15	34.60		3.75	180	7.90	1500	(2.12)	(34.67)	(27.72)	(38)	(1.179)
5	OSHORO MARU; June 29, 1955; 0623-0827 GCT; 53°00'N, 168°00'E; 27 05 02 065 27 x x 22 x x 3 16-17 3 xx xx 1 2 1.												
0		5.8	33.24	7.59	1.25	35	8.20	0	5.8	33.24	26.21	182	0.000
10	3	5.29	33.24	7.51	1.95	55	8.20	10	5.29	33.24	26.27	176	0.018
25	3	3.93	33.24	7.73	3.05	60	8.15	25	3.93	33.24	26.42	162	0.043
50	3	3.23	33.26	6.43	3.40	40	8.00	50	3.23	33.26	26.49	155	0.083
75	3	2.43	33.30	7.70	2.80	50	8.00	75	2.43	33.30	26.59	146	0.121
99	8	1.50	33.31	7.72	3.80	40	8.00	100	1.48	33.31	26.68	137	0.156
149	8	2.37	33.53	5.33	3.14	75	7.95	150	2.38	33.53	26.78	128	0.222
197	8	3.40	33.87	1.93	2.80	95	7.90	200	3.43	33.89	26.98	109	0.282
282	22	3.62	34.05	0.96	3.90	130	7.90	300	3.60	34.02	27.07	100	0.389
376	22	3.50	34.07	1.28	4.05	50	7.85	400	3.47	34.13	27.16	92	0.488
472	22	3.38	34.20	0.96	2.15	130	7.85	500	3.36	34.20	27.23	85	0.580
567	22	3.28	34.22	0.96	1.75	140	7.85	600	3.25	34.23	27.27	81	0.668
750	22	3.09	34.33	0.70	1.80	145	7.90	800	2.99	34.36	27.40	69	0.828
938	22	2.75	34.40	1.15	3.65	170	7.90	1000	2.70	34.42	27.46	63	0.971
1149	29	2.55	34.47	1.35	3.40	160	7.90	1200	2.50	34.47	27.53	57	1.104
1431	29	2.21	34.49	0.99	2.55	175	7.90	1500	(2.15)	(34.49)	(27.57)	(53)	(1.290)
6	OSHORO MARU; June 30, 1955; 0252-0430 GCT; 53°02'N, 170°00'E; 29 04 02 066 27 x x 27 x x 2 14-16 4 2701-1 xx 1 2 1.												
0		5.8	33.28	7.69	2.80	5	8.20	0	5.8	33.28	26.24	179	0.000
10	3	4.93	33.28	9.03	1.70	25	8.20	10	4.93	33.28	26.34	169	0.017
25	3	4.15	33.24	7.99	2.00	20	8.15	25	4.15	33.24	26.40	164	0.042
50	3	3.67	33.30	6.39	2.60	10	8.10	50	3.67	33.30	26.48	156	0.082
75	3	1.99	33.31	5.05	2.75	10	8.10	75	1.99	33.31	26.65	140	0.119
100	4	1.75	33.33	7.57	1.70	5	8.10	100	1.75	33.33	26.67	138	0.155
150	4	3.07	33.75	3.26	2.60	90	8.00	150	3.07	33.75	26.91	116	0.218
200	4	3.55	34.00	1.22	1.90	50	8.00	200	3.55	34.00	27.06	101	0.274
295	12	3.66	34.11	0.82	1.90	60	7.90	300	3.65	34.11	27.13	95	0.374
394	12	3.41	34.13	0.67	2.55	65	7.85	400	3.40	34.13	27.17	91	0.470
493	12	3.28	34.22	0.67	1.90	130	7.85	500	3.27	34.23	27.27	81	0.558
592	12	3.17	34.38	0.76	2.20	95	7.85	600	3.16	34.38	27.40	69	0.637
790	12	2.96	34.40	1.02	2.20	155	7.85	800	2.94	34.40	27.43	66	0.776
988	12	2.60	34.42	0.99	2.10	190	7.90	1000	2.58	34.42	27.47	62	0.918
1185	9	2.39	34.56	1.47	2.35	180	7.90	1200	2.38	34.56	27.61	49	1.038
1482	9	2.15	34.56	1.11	1.30	170	7.80	1500	(2.14)	(34.56)	(27.63)	(47)	(1.202)

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

OSHORO MARU; July 1, 1955; 0300-0430 GCT; 53°02'N, 172°00'E; 02 07 02 064 01 x x 36 x x 2 10-11 5 7
1700-1 xx 1 2 1.

0		5.4	33.24	7.82	2.25	45	8.20	0	5.4	33.24	26.26	177	0.000
10	0	5.19	33.22	7.99	1.40	90	8.20	10	5.19	33.22	26.27	176	0.018
25	0	4.76	33.24	8.35	1.75	75	8.20	25	4.76	33.24	26.33	171	0.044
50	0	4.06	33.24	6.35	1.32	75	8.20	50	4.06	33.24	26.40	164	0.086
75	0	3.34	33.24	7.56	2.10	85	8.15	75	3.34	33.24	26.47	157	0.126
100	1	2.89	33.33	7.01	2.10	85	8.00	100	2.89	33.33	26.58	147	0.164
150	1	2.84	33.44	6.23	3.00	85	8.00	150	2.84	33.44	26.68	137	0.235
200	1	3.50	33.71	3.78	2.30	110	7.90	200	3.50	33.71	26.83	123	0.301
292	9	3.64	33.96	1.45	2.40	90	7.95	300	3.63	33.98	27.04	103	0.416
392	9	3.54	34.09	1.15	2.40	125	7.95	400	3.53	34.09	27.13	95	0.518
492	9	3.48	34.14	0.92	2.55	135	7.95	500	3.47	34.14	27.18	90	0.614
591	9	3.41	34.25	0.92	2.60	125	7.95	600	3.40	34.27	27.29	80	0.703
785	12	3.16	34.34	0.83	1.90	140	7.90	800	3.14	34.34	27.37	72	0.864
990	9	2.89	34.40	0.94	2.55	145	7.90	1000	2.87	34.40	27.44	65	1.013
1184	12	2.65	34.45	0.86	2.00	175	7.90	1200	2.63	34.45	27.50	60	1.152
1485	12	2.34	34.54	1.24	2.25	175	7.90	1500	(2.33)	(34.54)	(27.60)	(50)	(1.340)

OSHORO MARU; July 1, 1955; 1630-2010 GCT; 54°30'N, 170°33'E; 36 02 02 040 36 x x 36 x x 3 21-24 4 xx 8
xx 1 2 1.

0		5.0	33.24	7.56	1.40	95	8.20	0	5.0	33.24	26.30	173	0.000
10	0	4.99	33.26	7.56	1.25	55	8.20	10	4.99	33.26	26.32	172	0.017
25	0	4.16	33.30	7.74	0.90	70	8.20	25	4.16	33.30	26.43	161	0.042
50	0	2.77	33.30	6.33	1.40	90	8.15	50	2.77	33.30	26.57	147	0.081
75	0	2.28	33.30	7.65	1.25	90	8.15	75	2.28	33.30	26.60	145	0.118
98	12	1.68	33.33	7.56	1.25	100	8.20	100	1.64	33.33	26.68	137	0.153
147	12	1.60	33.44	6.32	1.40	85	8.15	150	1.62	33.46	26.78	128	0.219
197	12	3.42	33.84	2.37	1.35	105	8.10	200	3.43	33.86	26.96	110	0.279
295	11	3.61	34.11	0.96	1.25	135	8.00	300	3.61	34.11	27.14	94	0.384
394	11	3.52	34.14	0.72	1.45	150	7.95	400	3.50	34.14	27.18	90	0.479
493	11	3.39	34.18	0.92	1.45	180	7.90	500	3.38	34.20	27.23	85	0.570
593	11	3.30	34.27	0.96	2.30	200	7.90	600	3.29	34.29	27.31	78	0.656
792	11	2.96	34.36	0.70	1.75	125	7.90	800	2.95	34.36	27.40	69	0.812
980	14	2.71	34.43	0.63	1.70	-	7.90	1000	2.70	34.43	27.48	62	0.954
1177	14	2.50	34.47	0.99	2.40	200	7.90	1200	2.48	34.47	27.53	57	1.086
1472	14	2.26	34.54	0.65	2.30	200	7.90	1500	2.25	34.54	27.61	49	1.268
1989	13	1.86	34.63	1.76	2.00	210	7.90	2000	(1.85)	(34.63)	(27.71)	(40)	(1.531)

OSHORO MARU; July 2, 1955; 1835-2130 GCT; 55°58'N, 169°11'E; 22 20 02 050 21 x x 22 x x 3 15-55 4 xx 9
xx xx 1,2 1

0		4.9	33.26	7.65	1.40	90	8.25	0	4.9	33.26	26.33	171	0.000
10	28	4.92	33.24	7.74	1.10	60	8.25	10	4.92	33.24	26.31	172	0.017
22	28	4.59	33.24	7.90	0.80	70	8.20	25	4.40	33.24	26.37	167	0.043
44	28	3.47	33.26	-	1.00	55	8.20	50	3.50	33.28	26.49	155	0.083
66	28	3.55	33.30	7.79	1.20	85	8.20	75	2.25	33.30	26.61	144	0.121
78	39	1.97	33.30	7.67	0.80	85	8.10	100	1.45	33.31	26.68	137	0.156
125	39	1.47	33.39	7.43	1.40	80	8.10	150	2.25	33.51	26.79	127	0.222
174	39	3.33	33.73	3.17	1.10	95	8.00	200	3.60	33.86	26.94	112	0.283
237	42	3.67	33.91	2.27	0.95	105	8.00	300	3.64	34.04	27.08	99	0.392
250	57	3.65	33.91	1.48	1.90	110	7.95	400	3.55	34.13	27.16	91	0.491
317	57	3.63	34.07	1.34	1.70	105	7.90	500	3.44	34.16	27.20	88	0.585
380	57	3.57	34.13	0.86	2.20	135	7.90	600	3.30	34.25	27.28	80	0.674
519	57	3.45	34.18	1.00	1.15	120	7.90	800	2.91	34.36	27.40	69	0.833
703	57	3.09	34.34	0.93	1.20	155	7.90	1000	2.67	34.45	27.49	61	0.974
977	59	2.70	34.43	1.29	1.20	180	7.90	1200	2.42	34.51	27.56	54	1.102
1239	59	2.39	34.52	1.15	1.40	185	7.90						

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	pH	Z	T	S	σ_t	δ_T	ΔD
m	⊀°	°C	‰	ml/L	µg at/L	µg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

10 OSHORO MARU; July 3–4, 1955; 2230–0006 GCT; 57°41'N, 167°59'E; 06 04 45 054 06 x x 22 x x 3 15-33 5 xx xx 1 2 1.

0		4.8	33.21	8.02	2.45	60	8.30	0	4.8	33.21	26.30	173	0.000
10	5	4.62	33.21	8.29	1.95	65	8.35	10	4.62	33.21	26.32	172	0.017
25	5	3.19	33.22	8.45	1.90	40	8.30	25	3.19	33.22	26.48	156	0.042
50	5	1.14	33.24	6.41	1.95	75	8.25	50	1.14	33.24	26.65	140	0.079
75	5	0.78	33.26	7.74	1.95	105	8.20	75	0.78	33.26	26.67	138	0.114
99	7	0.66	33.24	8.44	1.75	50	8.15	100	0.66	33.24	26.67	138	0.149
150	3	0.83	33.33	7.63	2.10	75	8.10	150	0.83	33.33	26.73	133	0.217
200	3	0.63	33.35	7.85	2.05	85	8.10	200	0.63	33.35	26.77	129	0.283
269	20	3.35	33.82	2.82	2.15	110	8.10	300	3.55	33.89	26.97	110	0.404
365	20	3.54	34.00	1.29	2.20	135	8.05	400	3.50	34.04	27.09	98	0.512
460	20	3.45	34.11	0.94	2.20	155	8.00	500	3.42	34.14	27.19	89	0.609
555	20	3.39	34.22	0.85	1.80	145	7.90	600	3.34	34.25	27.27	81	0.699
740	20	3.19	34.33	1.18	2.65	160	7.90	800	3.10	34.34	27.38	71	0.862
935	20	2.86	34.38	0.67	2.20	175	7.85	1000	2.78	34.40	27.44	65	1.011
1162	17	2.59	34.45	0.88	1.95	185	7.95	1200	2.53	34.47	27.52	58	1.148
1456	17	2.24	34.54	0.80	2.20	195	7.90	1500	(2.20)	(34.54)	(27.61)	(49)	(1.331)

11 OSHORO MARU; July 4, 1955; 0810–0950 GCT; 58°29'N, 166°32'E; 05 20 02 052 05 x x 04 x x 1 15-00 4 xx xx 1 2 1.

0		6.6	33.13	7.50	1.55	65	8.40	0	6.6	33.13	26.02	200	0.000
9	22	6.47	33.15	7.56	2.00	85	8.30	10	6.42	33.15	26.06	196	0.020
23	22	4.59	33.24	8.18	1.40	80	8.15	25	4.32	33.24	26.44	160	0.047
46	22	1.86	33.33	6.64	1.95	55	8.40	50	1.50	33.33	26.69	136	0.084
69	22	0.79	33.30	7.79	2.00	25	8.45	75	0.69	33.33	26.74	132	0.118
71	45	0.75	33.33	7.76	2.10	90	8.25	100	0.77	33.35	26.76	130	0.151
106	45	0.78	33.35	7.42	2.10	85	8.15	150	0.73	33.46	26.84	122	0.214
136	45	0.74	33.40	7.88	1.55	90	8.10	200	2.70	33.68	26.88	118	0.274
220	50	3.25	33.77	2.60	2.15	110	8.05	300	3.55	33.96	27.03	104	0.387
290	50	3.56	33.95	1.22	1.85	125	7.95	400	3.45	34.09	27.14	94	0.489
367	50	3.48	34.05	0.95	2.45	130	7.95	500	3.39	34.20	27.23	85	0.582
448	50	3.42	34.13	1.93	2.40	130	7.90	600	3.30	34.29	27.31	78	0.668
610	50	3.29	34.29	1.08	2.10	155	7.90	800	3.00	34.34	27.39	70	0.825
800	50	3.00	34.34	1.21	3.00	160	7.90	1000	2.76	34.58	27.59	51	0.958
1042	52	2.70	34.60	1.19	2.70	170	7.90	1200	2.51	34.58	27.62	48	1.071
1321	52	2.36	34.54	0.78	2.35	175	7.90						

12 OSHORO MARU; July 5, 1955; 0305–0425 GCT; 59°00'N, 170°00'E; 03 07 01 078 04 x x 04 x x 3 10-03 5 1150-3 xx 1 2 1.

0		4.7	32.95	8.07	2.30	35	8.40	0	4.7	32.95	26.11	191	0.000
10	2	4.57	32.99	8.00	1.75	20	8.40	10	4.57	32.99	26.16	186	0.019
25	2	2.93	33.15	8.49	1.05	20	8.40	25	2.93	33.15	26.44	160	0.045
50	2	1.10	33.21	6.58	2.05	50	8.25	50	1.10	33.21	26.62	143	0.083
75	2	0.73	33.30	7.92	2.10	55	8.20	75	0.73	33.30	26.71	135	0.118
99	6	0.70	33.31	7.92	1.95	85	8.15	100	0.70	33.31	26.73	133	0.152
149	6	0.70	33.37	7.75	2.30	60	8.10	150	0.70	33.37	26.77	129	0.218
199	6	0.81	33.39	7.71	2.00	75	8.00	200	0.82	33.39	26.78	128	0.282
287	12	3.29	33.77	3.05	1.45	90	8.00	300	3.35	33.80	26.92	115	0.405
386	12	3.54	34.00	1.44	2.45	90	7.85	400	3.53	34.02	27.08	99	0.515
485	12	3.43	34.09	1.24	2.05	140	7.85	500	3.42	34.11	27.16	92	0.614
584	12	3.36	34.23	1.22	2.60	105	7.85	600	3.34	34.25	27.27	81	0.705
784	12	3.15	34.33	1.14	2.55	125	7.85	800	3.12	34.33	27.36	73	0.869
984	12	2.96	34.36	1.03	2.60	135	7.85	1000	(2.94)	(34.36)	(27.40)	(69)	(1.023)

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	pH	Z	T	S	σ_t	δ_T	ΔD
m	⊀°	°C	‰	ml/L	µg at/L	µg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

OSHORO MARU; July 6, 1955; 0130-0505 GCT; 58°30'N, 173°15'E; 14 07 02 049 14 x x 18 x x 3 13-22 5 xx xx 1 2 1. 13

0		5.6	32.86	7.96	2.10	70	8.45	0	5.6	32.86	25.93	209	0.000
10	4	5.38	32.88	8.25	1.70	35	8.45	10	5.38	32.88	25.98	204	0.021
25	4	3.26	33.26	8.37	2.20	60	8.40	25	3.26	33.26	26.49	155	0.048
50	4	1.50	33.24	6.14	2.40	70	8.30	50	1.50	33.24	26.62	143	0.085
75	4	1.51	33.33	7.12	2.35	85	8.15	75	1.51	33.33	26.69	136	0.120
98	10	1.48	33.39	7.05	2.53	90	8.10	100	1.45	33.39	26.75	130	0.154
148	10	1.14	33.37	7.19	2.40	90	8.05	150	1.15	33.37	26.75	130	0.220
197	10	1.66	33.49	6.38	3.10	90	8.00	200	1.71	33.51	26.83	123	0.284
278	21	3.65	33.96	2.14	2.40	110	7.90	300	3.70	34.02	27.06	101	0.398
370	21	3.57	34.09	1.15	2.40	120	7.90	400	3.51	34.11	27.15	93	0.498
464	21	3.43	34.14	0.98	2.40	140	7.90	500	3.40	34.20	27.23	85	0.591
554	21	3.35	34.31	1.01	2.10	135	7.85	600	3.30	34.36	27.37	72	0.674
754	21	3.31	34.49	0.95	2.35	155	7.85	800	3.08	34.49	27.49	61	0.816
942	21	2.84	34.51	0.79	2.10	180	7.85	1000	2.77	34.51	27.54	55	0.945
1170	21	2.56	34.52	0.71	2.10	195	7.90	1200	2.52	34.54	27.59	51	1.066
1460	21	2.22	34.67	1.08	2.20	190	7.90	1500	(2.19)	(34.69)	(27.72)	(39)	(1.224)

OSHORO MARU; July 6, 1955; 1840-2005 GCT; 56°54'N, 173°17'E; 23 05 02 056 22 x x 20 x x 3 09-00 5 xx xx 1 2 1. 14

0		4.9	33.30	7.90	1.90	95	8.25	0	4.9	33.30	26.36	167	0.000
10	6	4.92	33.28	8.14	1.45	70	8.25	10	4.92	33.28	26.34	170	0.017
25	6	4.34	33.35	8.20	1.25	50	8.20	25	4.34	33.35	26.46	158	0.042
50	6	3.45	33.35	6.42	2.40	55	8.20	50	3.45	33.35	26.55	150	0.081
75	6	3.44	33.35	7.74	2.85	75	8.15	75	3.44	33.35	26.55	150	0.119
100	3	1.89	33.40	7.79	2.85	95	8.15	100	1.89	33.40	26.72	134	0.155
150	3	1.54	33.39	7.55	1.70	100	8.10	150	1.54	33.39	26.74	132	0.222
200	3	2.45	33.58	5.18	1.90	70	8.05	200	2.45	33.58	26.83	123	0.286
279	18	3.71	34.09	1.50	2.10	135	7.90	300	3.75	34.11	27.13	95	0.397
377	18	3.77	34.11	0.99	1.90	115	7.85	400	3.69	34.16	27.17	91	0.493
470	18	3.47	34.42	0.95	2.30	130	7.80	500	3.45	34.42	27.39	70	0.577
567	18	3.39	34.42	1.19	2.40	145	7.80	600	3.37	34.42	27.42	67	0.651
753	18	3.20	34.42	1.71	1.95	155	7.85	800	3.13	34.47	27.47	62	0.793
940	18	2.92	34.60	0.96	2.75	190	7.80	1000	2.85	34.60	27.60	50	0.918
1118	35	2.67	34.58	0.26	2.15	170	7.85	1200	2.57	34.58	27.61	49	1.031
1403	35	2.31	34.58	0.97	2.55	200	7.90	1500	(2.19)	(34.58)	(27.64)	(46)	(1.196)

OSHORO MARU; July 7, 1955; 0837-1002 GCT; 55°10'N, 173°17'E; 27 14 02 058 27 x x 27 x x 3 10-45 5 3694-1 xx 1 2 1. 15

0		5.4	33.33	7.98	4.20	40	8.25	0	5.4	33.33	26.33	171	0.000
10	18	5.24	33.26	8.06	2.65	25	8.20	10	5.24	33.26	26.29	174	0.017
24	18	4.14	33.33	8.16	2.80	50	8.20	25	4.11	33.33	26.47	157	0.042
48	18	3.67	33.33	6.67	2.85	65	8.20	50	3.60	33.33	26.52	153	0.081
72	18	2.54	33.33	8.04	1.20	55	8.20	75	2.44	33.33	26.62	143	0.118
92	23	2.05	33.37	7.88	3.10	65	8.20	100	1.93	33.39	26.71	135	0.153
138	23	1.71	33.39	7.53	3.10	65	8.05	150	2.10	33.40	26.71	135	0.221
184	23	3.36	33.69	4.99	3.70	80	8.00	200	3.65	33.77	26.86	120	0.285
276	29	3.71	34.04	1.59	2.65	80	7.85	300	3.69	34.07	27.10	98	0.396
369	29	3.61	34.13	1.22	2.95	100	7.85	400	3.58	34.20	27.21	87	0.491
460	29	3.52	34.23	0.94	2.05	120	7.80	500	3.46	34.31	27.31	78	0.577
554	29	3.83	34.33	1.28	2.45	110	7.80	600	3.34	34.34	27.35	74	0.657
749	29	3.21	34.47	2.15	2.95	120	7.80	800	3.14	34.45	27.45	64	0.805
939	29	2.93	34.45	0.93	2.65	125	7.85	1000	2.83	34.47	27.50	60	0.941
1120	34	2.70	34.58	1.35	2.75	135	7.85	1200	2.59	34.58	27.61	49	1.063
1400	34	2.39	34.54	1.06	2.45	170	7.85	1500	(2.29)	(34.54)	(27.61)	(49)	(1.231)

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	pH	Z	T	S	σ_t	δ_T	ΔD
m	σ_t	°C	‰	ml/L	μg at/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

16 OSHORO MARU; July 8-9, 1955; 2230-0003 GCT; 53°25'N, 173°38'E; 25 20 02 058 25 x x 25 x x 3 10-18 4 3891-1 xx 1 2 1.

0		5.2	33.28	7.88	3.05	8.30	0	5.2	33.28	26.31	172	0.000
9	25	5.02	33.24	7.92	3.20	8.20	10	5.01	33.24	26.29	174	0.017
23	25	5.66	33.24	7.90	3.90	8.20	25	5.65	33.24	26.23	180	0.044
45	25	4.16	33.26	6.31	3.15	8.15	50	4.13	33.26	26.41	163	0.087
68	25	4.25	33.26	7.59	3.10	8.10	75	3.70	33.30	26.48	156	0.127
81	37	2.72	33.35	7.43	2.80	8.15	100	2.60	33.39	26.66	139	0.164
128	37	2.71	33.42	6.75	3.35	8.10	150	2.86	33.48	26.69	136	0.233
176	37	3.23	33.58	5.20	3.00	8.10	200	3.50	33.69	26.81	125	0.301
242	33	3.62	33.87	3.21	2.20	7.95	300	3.60	33.93	26.99	108	0.424
328	33	3.58	33.96	1.94	1.80	7.90	400	3.59	34.11	27.14	94	0.528
411	33	3.60	34.14	1.02	3.20	7.90	500	3.54	34.23	27.24	84	0.621
494	33	3.55	34.23	1.18	3.00	7.85	600	3.43	34.29	27.30	78	0.707
675	48	3.36	34.33	0.88	3.30	7.85	800	3.16	34.38	27.40	69	0.866
862	48	3.04	34.42	0.67	3.15	7.85	1000	2.90	34.49	27.50	60	1.007
1051	48	2.87	34.51	1.30	3.30	7.85	1200	2.69	34.54	27.57	53	1.133
1338	48	2.54	34.58	0.82	3.35	7.90	1500	(2.36)	(34.61)	(27.66)	(45)	(1.294)

17 OSHORO MARU; July 8, 1955; 0620-0748 GCT; 53°10'N, 175°04'E; 2 18 01 086 27 x x 27 x x 2 10-20 4 3907-1 xx 1 2 1.

0		5.2	33.30	7.91	2.75	8.30	0	5.2	33.30	26.33	170	0.000
9	21	5.09	33.30	7.86	2.90	8.25	10	5.08	33.30	26.33	170	0.017
23	21	5.02	33.26	7.79	2.70	8.20	25	4.99	33.26	26.32	172	0.042
47	21	4.34	33.31	6.32	2.60	8.20	50	4.18	33.33	26.46	158	0.084
70	21	3.16	33.35	7.56	2.70	8.15	75	3.03	33.35	26.59	146	0.122
87	30	2.86	33.35	7.26	2.80	8.10	100	2.73	33.37	26.63	142	0.159
130	30	2.66	33.42	7.18	2.40	8.10	150	2.92	33.57	26.77	129	0.226
173	30	3.34	33.68	4.90	2.60	7.95	200	3.56	33.75	26.86	120	0.290
245	41	3.61	33.84	3.10	2.50	7.90	300	3.60	34.00	27.05	102	0.404
329	41	3.59	34.09	1.57	2.60	7.85	400	3.62	34.13	27.15	93	0.504
416	41	3.63	34.13	1.25	2.50	7.85	500	3.58	34.31	27.30	79	0.594
504	41	3.58	34.31	1.05	3.10	7.85	600	3.49	34.31	27.31	78	0.675
686	41	3.36	34.27	0.67	2.90	7.80	800	3.22	34.34	27.36	73	0.834
865	41	3.13	34.45	0.83	2.30	7.80	1000	2.95	34.49	27.50	60	0.976
1073	47	2.84	34.51	0.75	2.35	7.85	1200	2.66	34.56	27.58	52	1.098
1353	47	2.43	34.65	1.29	2.60	7.85	1500	(2.22)	34.69	(27.72)	(39)	(1.253)

18 OSHORO MARU; July 8, 1955; 1550-1734 GCT; 52°50'N, 176°56'E; 25 18 02 056 27 x x 27 x x 3 09-40 5 3900-1 xx 1 2 1.

0		5.1	33.24	7.73	2.45	8.25	0	5.1	33.24	26.29	174	0.000
9	28	5.00	33.21	7.88	2.45	8.20	10	4.99	33.21	26.28	175	0.017
22	28	4.98	33.24	7.91	2.25	8.15	25	4.95	33.26	26.32	172	0.043
44	28	4.65	33.30	6.31	1.95	8.15	50	4.40	33.30	26.41	163	0.085
65	30	3.71	33.31	3.58r	2.20	8.15	75	3.53	33.33	26.53	152	0.124
88	37	3.39	33.35	7.00	2.65	8.10	100	3.15	33.39	26.61	144	0.161
132	37	2.70	33.46	6.53	2.45	8.10	150	2.72	33.51	26.75	131	0.230
177	37	3.33	33.66	4.70	2.40	8.05	200	3.55	33.78	26.89	117	0.293
195	58	3.54	33.77	3.90	2.20	7.95	300	3.63	34.02	27.07	100	0.404
284	58	3.63	34.00	2.45	2.60	7.90	400	3.62	34.20	27.21	87	0.501
347	58	3.62	34.05	2.29	2.35	7.90	500	3.58	34.25	27.25	83	0.590
422	58	3.62	34.25	1.78	2.40	7.85	600	3.50	34.27	27.28	80	0.676
572	58	3.52	34.25	1.12	2.45	7.85	800	3.21	34.42	27.42	67	0.834
765	58	3.27	34.40	0.95	3.00	7.85	1000	2.91	34.49	27.51	60	0.973
1050	60	2.86	34.51	0.93	1.75	7.85	1200	2.65	34.54	27.57	53	1.099
1331	60	2.46	34.56	1.53	2.00	7.90	1500	(2.23)	(34.60)	(27.65)	(45)	(1.269)

OBSERVED								INTERPOLATED			COMPUTED			
Z m	W x°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	

OSHORO MARU; July 9, 1955; 0110-0210 GCT; 52°28'N, 178°40'E; 29 17 02 064 31 x x 31 x x 2 12-51 5 19
2473-1 xx 1 2 1.

0		5.3	33.26	7.49	1.40		8.20	0	5.3	33.26	26.28	175	0.000
9	26	5.07	33.24	7.57	1.75		8.20	10	5.06	33.24	26.30	173	0.017
22	26	5.10	33.26	7.59	1.80		8.20	25	5.11	33.26	26.30	173	0.043
45	26	4.56	33.35	6.25	1.80		8.15	50	4.31	33.35	26.47	157	0.085
67	26	3.31	33.33	7.49	1.85		8.15	75	3.01	33.35	26.59	146	0.123
82	35	2.88	33.39	7.41	2.20		8.10	100	2.80	33.42	26.67	138	0.159
128	35	2.91	33.48	6.91	1.95		8.05	150	3.01	33.51	26.72	134	0.227
171	35	3.12	33.55	5.76	1.65		7.95	200	3.54	33.77	26.87	119	0.292
213	54	3.69	33.87	3.04	1.80		7.95	300	3.61	34.07	27.10	93	0.403
290	54	3.63	34.05	1.58	1.55		7.90	400	3.53	34.14	27.17	91	0.500
443	54	3.51	34.20	1.47	1.50		7.90	500	3.47	34.25	27.29	80	0.590
735	54	3.22	34.42	0.68	1.05		7.90	600	3.35	34.33	27.34	74	0.672
1212	54	2.54	34.56	0.86	2.05		7.90	800	3.14	34.45	27.45	64	0.817
								1000	2.84	34.51	27.53	57	0.945
								1200	2.56	34.52	27.56	54	1.066

OSHORO MARU; July 9, 1955; 1135-1355 GCT; 52°30'N, 178°54'W; 31 15 02 062 31 x x 31 x x 1 xx x 3425-1 20
xx 1 2 1.

0		5.6	33.39	7.35	1.95		8.20	0	5.6	33.39	26.35	168	0.000
8	32	5.46	33.21	7.51	2.05		8.20	10	5.44	33.21	26.22	181	0.018
21	32	5.46	33.21	7.48	1.95		8.15	25	5.39	33.22	26.25	178	0.045
42	32	4.41	33.30	5.54	2.35		8.15	50	4.10	33.30	26.44	160	0.087
64	32	3.88	33.30	5.82	2.15		8.10	75	4.00	33.31	26.47	157	0.127
85	32	4.18	33.33	8.02	2.35		8.10	100	4.19	33.37	26.49	155	0.166
133	39	3.55	33.39	6.84	2.40		8.05	150	3.29	33.37	26.58	147	0.242
173	39	3.15	33.37	6.56	1.45		8.00	200	3.19	33.58	26.76	130	0.312
259	56	3.42	33.66	5.55	1.60		8.00	300	3.72	33.78	26.87	119	0.439
274	56	3.60	33.73	4.11	1.90		7.95	400	3.71	34.00	27.04	103	0.553
419	56	3.69	34.04	3.40	1.90		7.90	500	3.58	34.14	27.17	91	0.654
740	56	3.30	34.33	0.94	2.40		7.85	600	3.43	34.23	27.26	82	0.745
1205	56	2.66	34.52	1.51	2.90		7.90	800	3.22	34.36	27.37	72	0.910
								1000	2.97	34.45	27.47	62	1.057
								1200	2.65	34.52	27.55	55	1.188

OSHORO MARU; July 10, 1955; 0455-0713 GCT; 53°14'N, 178°40'E; 31 08 00 073 31 x x 31 x x 2 18-30 4 21
2966-1 1 2 1.

0		5.9	33.28	7.32	4.00	55	8.20	0	5.9	33.28	26.22	181	0.000
10	12	5.56	33.24	7.34	2.40	60	8.10	10	5.56	33.24	26.24	179	0.018
24	12	5.36	33.26	7.35	3.10	45	8.15	25	5.35	33.26	26.27	176	0.045
49	12	4.38	33.31	6.00	2.85	25	8.05	50	4.32	33.31	26.44	160	0.087
73	12	3.16	33.39	6.54	2.65	60	8.00	75	3.13	33.40	26.62	143	0.125
95	17	3.11	33.44	6.19	2.30	70	8.00	100	3.10	33.44	26.65	140	0.161
147	12	3.02	33.42	4.74	2.85	75	7.90	150	3.02	33.42	26.65	140	0.232
191	17	3.52	33.64	3.86	2.65	85	7.90	200	3.53	33.68	26.80	126	0.299
266	31	3.71	33.87	1.87	2.60	110	7.85	300	3.72	33.96	27.01	106	0.417
373	18	3.65	34.11	1.10	3.05	125	7.85	400	3.60	34.13	27.17	91	0.518
450	31	3.51	34.18	0.82	2.10	105	7.85	500	3.48	34.22	27.23	85	0.610
541	31	3.46	34.25	0.95	2.40	125	7.85	600	3.40	34.31	27.32	77	0.695
723	31	3.27	34.40	0.62	4.05	135	7.85	800	3.13	34.43	27.44	65	0.847
918	31	2.93	34.45	0.76	2.55	135	7.85	1000	2.82	34.47	27.50	60	0.984
1136	18	2.65	34.51	0.79	2.65	140	7.85	1200	2.57	34.52	27.56	54	1.111
1428	18	2.30	34.58	1.02	2.70	170	7.85	1500	(2.20)	(34.60)	(27.65)	(45)	(1.282)

	OBSERVED								INTERPOLATED			COMPUTED		
	Z	W	T	S	O_2	PO_4-P	Si	pH	Z	T	S	σ_t	δ_T	ΔD
	m	±°	°C	‰	ml/L	µg at/L	µg at/L		m	°C	‰	g/L	10^{-5} cm³/g	dyn. m
22	OSHORO MARU; July 10, 1955; 1220-1338 GCT; 53°54'N, 178°40'E; 31 05 02 062 31 x x 36 x x 1 xx x xx xx 1 2 1.													
	0		5.4	33.21	7.39	1.95		8.20	0	5.4	33.21	26.23	180	0.000
	10	10	5.30	33.19	7.61	2.75		8.20	10	5.30	33.19	26.23	180	0.018
	25	10	5.10	33.21	7.54	1.95		8.15	25	5.10	33.21	26.26	177	0.045
	49	10	4.16	33.30	5.12	1.75		8.15	50	4.10	33.30	26.44	160	0.087
	73	13	2.81	33.35	7.52	1.75		8.10	75	2.79	33.35	26.61	144	0.125
	95	18	2.69	33.35	7.09	2.15		8.15	100	2.63	33.35	26.63	142	0.161
	143	18	2.19	33.46	6.78	2.30		8.05	150	2.20	33.49	26.77	129	0.229
	190	18	3.58	33.71	3.51	2.25		7.90	200	3.69	33.77	26.86	120	0.292
	261	31	3.75	33.96	2.00	2.00		7.85	300	3.69	34.04	27.07	100	0.405
	351	31	3.60	34.11	1.26	2.10		7.80	400	3.51	34.16	27.19	89	0.503
	441	31	3.46	34.20	1.11	2.05		7.80	500	3.42	34.25	27.27	81	0.592
	530	31	3.41	34.27	1.12	2.40		7.80	600	3.38	34.29	27.31	77	0.676
	718	31	3.30	34.33	0.59	2.20		7.85	800	3.20	34.42	27.42	67	0.832
	903	31	2.98	34.51	0.63	2.35		7.85	1000	2.85	34.51	27.53	57	0.968
	1101	35	2.70	34.51	0.80	2.10		7.85	1200	2.58	34.54	27.58	52	1.090
	1387	35	2.33	34.63	1.00	2.35		7.85	1500	(2.18)	(34.69)	(27.73)	(37)	(1.249)
23	OSHORO MARU; July 11, 1955; 0020-0153 GCT; 53°03'N, 178°52'W; 29 05 02 092 29 x x 36 x x 2 10-27 6 2560-1 xx 1 2 1.													
	0		6.6	33.21	7.44	1.80	75	8.20	0	6.6	33.21	26.08	194	0.000
	10	7	5.60	33.17	7.57	2.30	45	8.15	10	5.60	33.17	26.18	185	0.019
	25	7	5.51	33.17	7.52	1.50	60	8.15	25	5.51	33.17	26.21	182	0.047
	50	7	4.50	33.30	5.26	1.75	75	8.10	50	4.50	33.30	26.40	164	0.090
	74	7	4.11	33.37	6.03	2.05	65	8.10	75	4.10	33.37	26.50	154	0.130
	96	15	4.07	33.39	5.50	2.25	65	8.10	100	4.06	33.39	26.52	153	0.169
	144	15	3.94	33.39	4.93	2.75	60	8.05	150	3.92	33.39	26.54	151	0.245
	187	15	3.68	33.48	5.31	3.05	15	8.05	200	3.65	33.53	26.67	138	0.318
	280	24	3.71	33.84	3.63	2.25	55	8.00	300	3.72	33.93	26.98	109	0.444
	376	24	3.74	-	2.04	2.05	105	7.95	400	3.73	34.04	27.06	101	0.652
	473	24	3.67	34.09	1.69	2.20	110	7.85	500	3.65	34.11	27.13	95	0.754
	570	24	3.61	34.22	1.25	2.20	115	7.80	600	3.58	34.23	27.24	84	0.848
	763	24	3.36	34.33	0.86	1.85	100	7.85	800	3.30	34.34	27.36	73	1.016
	955	24	3.04	34.42	1.03	2.00	135	7.85	1000	2.98	34.43	27.46	63	1.165
	1170	20	2.79	34.49	0.71	2.05	105	7.85	1200	2.75	34.51	27.54	56	1.298
	1465	20	2.39	34.58	0.99	2.40	145	7.85	1500	(2.34)	(34.60)	(27.64)	(46)	(1.474)
24	OSHORO MARU; July 11, 1955; 0720-0900 GCT; 53°50'N, 178°52'W; 23 03 03 077 23 x x 36 x x 3 15-08 4 3694-1 xx 1 2 1.													
	0		6.4	33.30	7.29	2.15		8.20	0	6.4	33.30	26.17	184	0.000
	10	0	5.61	33.28	7.42	2.35		8.20	10	5.61	33.28	26.26	177	0.018
	25	0	5.50	33.22	7.45	2.60		8.20	25	5.50	33.22	26.24	179	0.045
	50	0	5.23	33.21	6.10	1.95		8.20	50	5.23	33.21	26.25	178	0.090
	75	0	3.87	33.39	6.28	2.55		8.10	75	3.87	33.39	26.54	151	0.131
	100	3	3.49	33.39	6.60	2.60		8.05	100	3.49	33.39	26.58	147	0.168
	150	3	3.45	33.46	5.83	2.50		7.95	150	3.45	33.46	26.63	142	0.241
	200	3	3.13	33.46	6.03	2.75		7.95	200	3.13	33.46	26.66	139	0.312
	297	9	3.80	33.80	3.21	2.75		7.90	300	3.82	33.82	26.89	117	0.442
	397	9	3.69	34.05	1.89	3.05		7.85	400	3.68	34.05	27.08	99	0.554
	497	9	3.52	34.14	1.71	2.50		7.85	500	3.51	34.14	27.18	90	0.653
	594	9	3.46	34.33	1.09	2.30		7.80	600	3.45	34.34	27.34	75	0.740
	777	9	3.22	34.40	0.68	2.05		7.85	800	3.21	34.40	27.41	68	0.893
	939	9	2.98	34.47	0.79	2.45		7.80	1000	2.97	34.45	27.47	62	1.036
	1196	10	-	-	0.64	2.35		7.85	1200	2.67	34.51	27.54	56	1.168
	1474	10	2.36	34.58	0.95	1.95		7.85	1500	(2.35)	(34.58)	(27.63)	(47)	(1.345)

FFHU

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
25	OSHORO MARU; July 11, 1955; 2030-2152 GCT; 55°34'N, 178°48'W; 23 15 02 064 23 x x 22 x x 3 17-30 4 xx xx 1 2 1.												
0		6.8	33.13	7.19	1.70	50	8.25	0	6.8	33.13	25.99	203	0.000
9	25	6.50	33.10	7.25	1.65	40	8.20	10	6.48	33.10	26.00	202	0.020
23	25	6.40	33.12	7.24	1.70	40	8.20	25	6.36	33.12	26.04	198	0.050
46	25	4.46	33.30	6.05	1.20	65	8.15	50	4.25	33.31	26.44	160	0.095
68	25	3.65	33.40	6.74	1.70	45	8.15	75	3.50	33.31	26.52	153	0.134
77	40	3.45	33.31	6.60	1.65	45	8.10	100	3.07	33.30	26.55	149	0.172
134	40	2.84	33.31	6.90	1.05	105	8.00	150	2.60	33.31	26.60	145	0.246
177	40	2.49	33.31	7.44	1.60	60	8.00	200	2.56	33.42	26.68	137	0.311
221	43	3.07	33.64	5.37	1.75	70	8.00	300	3.63	33.87	26.95	112	0.443
305	43	3.64	33.89	2.73	1.55	100	7.90	400	3.63	34.18	27.20	88	0.546
386	43	3.64	34.18	1.99	1.70	130	7.85	500	3.50	34.18	27.21	87	0.637
467	43	3.59	34.16	1.38	1.90	125	7.85	600	3.34	34.27	27.29	80	0.725
628	43	3.31	34.31	0.82	1.95	170	7.80	800	3.09	34.49	27.49	61	0.875
818	43	3.08	34.51	1.21	1.70	145	7.85	1000	2.87	34.54	27.56	54	1.002
1053	52	2.80	34.54	0.81	1.60	180	7.80	1200	2.60	34.58	27.61	49	1.119
1329	52	2.45	34.61	0.86	1.65	210	7.85	1500	(2.21)	(34.63)	(27.68)	(43)	(1.278)
26	OSHORO MARU; July 12, 1955; 0715-0842 GCT; 57°00'N, 178°58'W; 31 05 02 061 31 x x 22 x x 1 12-28 5 xx xx 1 2 1.												
0		6.7	33.15	7.49	2.15		8.35	0	6.7	33.15	26.03	199	0.000
10	4	6.74	33.12	7.49	1.70		8.30	10	6.74	33.12	26.00	201	0.020
25	4	5.86	33.21	7.92	1.60		8.30	25	5.86	33.21	26.17	186	0.049
50	4	3.46	33.30	6.63	1.95		8.25	50	3.46	33.30	26.50	154	0.092
75	4	3.31	33.30	7.72	2.10		8.25	75	3.31	33.30	26.52	153	0.131
96	16	2.36	33.37	7.17	1.70		8.20	100	2.24	33.37	26.67	138	0.167
146	16	1.67	33.33	7.59	2.00		8.10	150	1.67	33.33	26.68	137	0.236
196	16	2.42	33.51	6.03	2.00		8.10	200	2.50	33.53	26.77	127	0.303
285	24	3.69	34.05	2.12	2.90		7.95	300	3.70	34.07	27.10	98	0.418
382	24	3.55	34.05	1.48	2.30		7.90	400	3.52	34.07	27.12	96	0.518
480	24	3.42	34.20	1.29	2.10		7.85	500	3.40	34.22	27.24	84	0.612
575	24	3.31	34.29	0.92	1.70		7.85	600	3.29	34.31	27.33	76	0.696
772	24	3.14	34.34	0.61	1.80		7.85	800	3.11	34.34	27.38	71	0.853
972	24	2.85	34.43	0.60	1.90		7.85	1000	2.81	34.45	27.48	62	0.998
1179	12	2.61	34.54	0.80	2.00		7.85	1200	2.59	34.54	27.58	52	1.125
1466	12	2.28	34.58	1.06	1.90		7.85	1500	(2.24)	(34.58)	(27.64)	(46)	(1.295)
27	OSHORO MARU; July 12, 1955; 2010-2315 GCT; 58°49'N, 178°43'W; 18 20 20 066 18 x x 18 x x 3 5-14 8 xx xx 1 2 1.												
0		6.9	32.99	8.19	1.30	15	8.30	0	6.9	32.99	25.87	214	0.000
8	34	6.77	33.12	8.36	1.95	0	8.30	10	6.75	33.12	25.99	203	0.021
21	34	6.78	33.01	8.44	0.90	10	8.30	25	6.70	32.99	25.90	211	0.052
42	34	2.44	33.12	6.21	1.55	40	8.30	50	2.37	33.12	26.46	158	0.098
60	53	2.30	33.12	7.54	2.00	65	8.15	75	2.19	33.12	26.47	157	0.138
100	53	2.08	33.13	7.49	2.50	60	8.10	100	2.08	33.13	26.49	155	0.177
141	53	2.12	33.19	7.44	1.65	65	8.00	150	2.23	33.19	26.53	152	0.254
169	59	2.60	33.22	6.67	1.45	65	7.95	200	3.13	33.33	26.56	149	0.329
240	59	3.56	33.49	4.67	1.50	80	7.95	300	3.78	33.58	26.71	135	0.472
302	59	3.78	33.58	5.42	1.70	85	7.90	400	3.73	33.75	26.84	122	0.604
361	59	3.74	33.66	3.55	1.50	95	7.90	500	3.68	33.89	26.96	111	0.724
478	59	3.71	33.86	2.37	2.30	100	7.85	600	3.56	34.04	27.08	99	0.834
625	71	3.52	34.05	1.24	2.15	105	7.85	800	3.23	34.20	27.25	83	1.027
799	71	3.23	34.20	1.02	2.10	130	7.85	1000	2.99	34.34	27.39	70	1.193
1053	71	2.91	34.36	0.66	2.10	165	7.85	1200	(2.71)	(34.42)	(27.46)	(63)	(1.341)

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ‹°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
28	OSHORO MARU; July 14, 1955; 2205-2230 GCT; 57°16'N, 171°50'W; 18 15 41 062 18 x x 22 x x 3 15-36 4 105-3 xx 1(100-0m haul), 2 1.												
0		6.3	32.57	7.40	2.45	10	8.45	0	6.3	32.57	25.62	238	0.000
10	18	6.15	32.36	7.60	2.00	20	8.40	10	6.15	32.36	25.47	252	0.025
24	18	5.98	32.34	7.49	1.35	15	8.40	25	5.94	32.34	25.48	251	0.063
48	18	4.94	32.66	6.08	1.80	20	8.35	50	4.80	32.68	25.88	213	0.121
71	18	2.78	32.88	6.21	1.95	55	8.05	75	2.62	32.90	26.26	177	0.170
95	18	2.42	32.94	6.00	2.20	65	8.00	100	(2.36)	(32.95)	(26.33)	(171)	(0.213)
29	OSHORO MARU; July 15, 1955; 0445-0505 GCT; 57°27'N, 170°11'W; 18 11 40 053 18 x x 22 x x 2 12-08 5 62-3 xx 1(50-0m haul), 2 1.												
0		5.8	32.32	7.92	2.00	10	8.45	0	5.8	32.32	25.49	250	0.000
10	8	5.54	32.25	7.98	1.55	15	8.45	10	5.54	32.25	25.46	253	0.025
25	8	4.26	32.39	8.58	2.15	10	8.40	25	4.26	32.39	25.71	229	0.061
50	8	3.01	32.50	6.17	1.75	25	8.30	50	3.01	32.50	25.91	210	0.116
30	OSHORO MARU; July 15, 1955; 1720-1735 GCT; 57°26'N, 167°05'W; 22 11 02 063 22 x x 18 x x 3 09-20 4 65-3 xx 1(50-0m haul), 2 1.												
0		5.8	32.16	7.67	2.45	30	8.40	0	5.8	32.16	25.36	263	0.000
10	7	5.65	32.20	7.79	1.85	25	8.35	10	5.65	32.20	25.41	258	0.026
25	7	4.35	32.20	7.56	2.05	20	8.35	25	4.35	32.20	25.55	245	0.064
50	7	2.45	32.34	5.96	2.00	30	8.25	50	2.45	32.34	25.83	218	0.122
31	OSHORO MARU; July 16, 1955; 0550-0615 GCT; 57°23'N, 163°58'W; 18 06 41 066 22 x x 22 x x 2 09-15 5 59-3 xx 1(50-0m haul), 2 1.												
0		6.0	31.89	7.73	0.95	30	8.40	0	6.0	31.89	25.12	286	0.000
10	8	5.84	31.91	8.17	1.00	15	8.40	10	5.84	31.91	25.16	282	0.028
25	8	4.60	32.07	7.25	0.85	15	8.35	25	4.60	32.07	25.42	257	0.068
50	8	3.15	32.10	5.97	2.15	35	8.25	50	3.15	32.10	25.58	242	0.120
32	OSHORO MARU; July 16, 1955; 1600-1700 GCT; 57°16'N, 161°40'W; 23 02 43 069 00 x x 22 x x 3 07-00 5 54-3 xx 1(50-0m haul), 2 x.												
0		5.0	31.80	7.53	0.70	35	8.40	0	5.0	31.80	25.17	281	0.000
10	0	4.88	31.82	7.71	2.40	20	8.40	10	4.88	31.82	25.19	279	0.028
25	0	4.28	31.87	7.66	2.30	20	8.40	25	4.28	31.87	25.30	268	0.069
50	0	4.24	31.87	6.34	2.75	25	8.35	50	4.24	31.87	25.30	268	0.136
33	OSHORO MARU; July 20, 1955; 0645-0715 GCT; 56°04'N, 163°15'W; 22 07 02 094 25 x x 25 x x 2 12-18 4 82-3 xx 1(50-0m haul), 2 1.												
0		8.2	31.76	7.66	1.85	20	8.40	0	8.2	31.76	24.73	323	0.000
10	5	7.67	31.78	7.53	2.70	15	8.40	10	7.67	31.78	24.81	315	0.032
25	5	6.47	31.91	7.34	2.55	30	8.40	25	6.47	31.91	25.08	289	0.077
50	5	3.83	32.16	4.84	4.70	35	8.35	50	3.83	32.16	25.57	243	0.144
75	5	3.62	32.14	5.87	3.75	40	8.20	75	3.62	32.14	25.57	243	0.204
34	OSHORO MARU; July 20, 1955; 2040-2115 GCT; 54°46'N, 165°19'W; 15 13 02 088 16 x x 15 x x 1 12-24 5 170-3 xx 1,2 1.												
0		7.8	32.61	7.43	2.05	30	8.35	0	7.8	32.61	25.45	254	0.000
10	9	6.45	32.65	7.35	2.50	55	8.30	10	6.45	32.65	25.66	234	0.024
25	9	6.33	32.63	7.40	2.10	55	8.30	25	6.33	32.63	25.67	233	0.059
50	9	5.39	32.70	5.64	2.25	80	8.30	50	5.39	32.70	25.83	218	0.116
74	9	5.36	32.74	6.77	2.40	45	8.25	75	5.37	32.74	25.86	215	0.170
97	14	5.40	32.72	6.55	3.65	30	8.25	100	5.40	32.72	25.85	216	0.224
147	14	5.04	32.88	6.73	2.60	60	8.20	150	(5.02)	(32.90)	(26.03)	(199)	(0.328)

OBSERVED								INTERPOLATED			COMPUTED			
Z	W	T	S	O_2	PO_4-P	Si	pH	Z	T	S	σ_t	δ_T	ΔD	
m	ϟ°	°C	‰	ml/L	µg at/L	µg at/L		m	°C	‰	g/L	$10^5 cm^3/g$	dyn. m	

OSHORO MARU; July 21, 1955; 0920-1050 GCT; 53°40'N, 163°31'W; 21 01 02 100 21 x x 22 x x 3 xx x 1630-3 xx 1 2 1. 35

0		9.8	31.91	7.08	3.60	25	8.45	0	9.8	31.91	24.60	335	0.000
10	9	9.06	31.82	7.32	3.55	25	8.40	10	9.06	31.82	24.64	331	0.033
25	9	8.78	32.32	7.12	3.95	40	8.40	25	8.78	32.32	25.08	289	0.080
49	9	6.07	32.68	5.52	3.55	30	8.40	50	6.00	32.70	25.76	225	0.144
74	9	5.00	33.03	5.93	3.15	55	8.20	75	4.99	33.04	26.15	188	0.196
100	4	4.92	33.35	4.34	3.10	55	8.15	100	4.92	33.35	26.40	164	0.240
150	4	5.06	33.77	2.52	3.55	70	8.10	150	5.06	33.77	26.71	135	0.315
200	4	4.72	33.87	1.81	4.15	115	7.85	200	4.72	33.87	26.84	122	0.380
298	5	4.38	34.02	1.09	3.35	130	7.85	300	4.37	34.02	26.99	108	0.498
396	5	3.97	34.11	0.54	3.30	130	7.85	400	3.96	34.11	27.10	98	0.604
496	5	3.78	34.20	0.73	2.70	150	7.85	500	3.77	34.20	27.19	89	0.701
595	5	3.62	34.25	0.67	2.80	165	7.85	600	3.61	34.25	27.25	83	0.792
794	5	3.37	34.34	0.53	3.35	165	7.80	800	3.36	34.34	27.35	74	0.960
990	7	3.07	34.45	0.76	3.60	180	7.85	1000	3.05	34.45	27.46	63	1.110
1188	7	2.63	34.51	0.94	4.00	185	7.85	1200	2.60	34.51	27.55	55	1.242
1482	7	2.21	34.54	1.09	2.50	185	7.90	1500	(2.19)	(34.54)	(27.61)	(49)	(1.421)

OSHORO MARU; July 21, 1955; 1725-1900 GCT; 52°58'N, 162°19'W; 25 05 02 108 25 x x 25 x x 1 21-19 2 5769-1 xx 1 2 1. 36

0		10.3	32.45	6.82	2.50	10	8.40	0	10.3	32.45	24.93	304	0.000
10	6	9.22	32.45	6.94	2.20	20	8.40	10	9.22	32.45	25.11	286	0.030
25	6	7.72	32.48	7.04	2.25	10	8.40	25	7.72	32.48	25.36	263	0.071
50	6	5.61	32.68	5.91	2.05	25	8.35	50	5.61	32.68	25.79	222	0.132
75	6	3.77	33.04	6.37	2.25	35	8.15	75	3.77	33.04	26.28	175	0.182
100	10	3.71	33.37	4.33	3.45	55	8.00	100	3.71	33.37	26.54	151	0.223
150	10	4.17	33.87	1.25	2.45	80	7.85	150	4.17	33.87	26.90	117	0.290
200	10	4.05	33.93	0.74	3.25	85	7.85	200	4.05	33.93	26.95	112	0.348
280	17	3.95	34.11	0.58	2.20	95	7.80	300	3.93	34.13	27.12	96	0.454
374	17	3.84	34.16	0.58	2.45	105	7.80	400	3.77	34.18	27.18	90	0.550
465	17	3.57	34.23	0.50	2.40	125	7.80	500	3.47	34.27	27.28	80	0.639
561	17	3.38	34.31	0.68	2.35	125	7.80	600	3.31	34.33	27.34	75	0.721
750	17	3.12	34.36	0.65	2.65	135	7.80	800	3.05	34.38	27.41	68	0.874
978	17	2.72	34.43	0.68	2.45	135	7.85	1000	2.67	34.43	27.48	62	1.015
1175	17	2.37	34.45	0.77	2.00	155	7.85	1200	2.33	34.45	27.52	58	1.146
1470	17	2.07	34.54	1.30	2.40	160	7.85	1500	(2.04)	(34.54)	(27.63)	(47)	(1.323)

OSHORO MARU; July 22, 1955; 0130-0320 GCT; 52°15'N, 161°09'W; 22 03 47 116 22 x x 18 x x 2 20-18 5 4714-1 xx 1 2 1. 37

0		10.6	32.39	7.06	1.40	25	8.40	0	10.6	32.39	24.84	312	0.000
10	4	8.87	32.38	7.49	1.95	50	8.40	10	8.87	32.38	25.10	287	0.030
25	4	8.33	32.39	7.37	1.50	45	8.40	25	8.33	32.39	25.20	278	0.072
50	4	5.56	32.57	5.64	1.75	45	8.35	50	5.56	32.57	25.71	229	0.136
75	4	3.88	33.01	6.12	1.55	70	8.15	75	3.88	33.01	26.24	179	0.187
100	4	4.17	33.30	5.00	1.50	85	8.00	100	4.17	33.30	26.45	159	0.230
150	4	4.18	33.78	1.86	1.80	90	7.85	150	4.18	33.78	26.83	123	0.302
200	4	4.14	33.95	0.82	1.75	90	7.80	200	4.14	33.95	26.96	111	0.361
298	7	4.03	34.11	0.69	2.05	120	7.80	300	4.02	34.11	27.10	98	0.468
398	7	3.79	34.14	0.56	1.50	145	7.80	400	3.79	34.14	27.15	93	0.566
498	7	3.57	34.27	0.83	2.45	190	7.85	500	3.57	34.27	27.27	81	0.657
597	7	3.41	34.34	0.50	4.25	130	7.80	600	3.40	34.34	27.35	74	0.739
796	5	3.04	34.34	0.55	4.55	165	7.85	800	3.03	34.34	27.38	71	0.893
994	5	2.72	34.43	0.69	2.50	175	7.85	1000	2.71	34.43	27.48	62	1.037
1193	5	2.44	34.45	0.96	2.25	200	7.85	1200	2.43	34.45	27.51	59	1.170
1492	5	2.24	34.54	1.17	3.25	155	7.90	1500	(2.23)	(34.54)	(27.61)	(49)	(1.353)

OBSERVATIONS OF THE FACULTY OF FISHERIES, KAGOSHIMA UNIVERSITY

FFKU

NORPAC

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	ϕ°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm³/g	dyn. m
KAGOSHIMA MARU; July 26, 1955; 1458-1715 GCT; 20°01'N, 130°00'E; 1505 02 280										520
12x0 1 x x 6000 Pl, La, Ra.[a]										
0	0	28.8	34.61	4.00	0	28.8	34.61	21.86	597	0.000
10	0	28.89	34.58	4.00	10	28.89	34.58	21.81	602	0.060
25	0	28.69	34.69	4.58	25	28.69	34.69	21.96	587	0.149
49	9	27.39	34.81	4.54	50	27.32	34.81	22.49	537	0.290
74	9	25.59	34.87	4.90	75	25.50	34.87	23.11	477	0.418
103	24	22.77	34.99	4.12	100	23.06	34.98	23.91	401	0.529
149	24	20.65	34.99	-	150	20.59	34.99	24.62	333	0.692
199	20	17.72	34.87	4.56	200	17.70	34.87	25.27	271	0.846
257	18	16.98	34.74	4.55	300	15.87	34.54	25.45	254	1.116
321	19	15.35	34.45	4.28	400	11.78	34.47	26.24	179	1.347
397	19	11.87	34.47	4.76	500	8.56	34.09	26.49	155	1.528
498	20	8.60	34.09	3.99	600	6.76	34.09	26.76	130	1.680
599	15	6.77	34.09	2.66	700	5.87	34.25	27.00	107	1.808
807	10	5.02	34.42	2.46	800	5.07	34.40	27.22	86	1.914
1015	11	3.53	34.43	1.69	1000	3.63	34.43	27.40	69	2.086
KAGOSHIMA MARU; July 27, 1955; 0200-0350 GCT; 20°37'N, 130°58'E; 2702 02 279										521
18x0 2 x x 6000 Pl, La, Ra.										
0	0	28.6	34.42	5.43	0	28.6	34.42	21.78	604	0.000
10	0	28.82	34.60	4.60	10	28.82	34.60	21.86	597	0.060
25	0	28.79	34.81	4.45	25	28.79	34.81	22.02	581	0.149
50	5	27.44	34.98	4.98	50	27.44	34.98	22.58	528	0.288
75	0	25.03	34.98	5.08	75	25.03	34.98	23.33	456	0.411
100	5	23.25	34.98	4.83	100	23.25	34.98	23.86	406	0.520
149	5	21.17	35.10	4.27	150	21.13	35.10	24.55	340	0.709
199	13	18.95	34.89	4.61	200	18.92	34.89	24.97	300	0.873
265	11	17.05	34.87	4.60	300	16.17	34.85	25.62	238	1.150
301	17	16.14	34.85	4.57	400	13.45	34.42	25.86	215	1.386
407	14	13.27	34.38	4.39	500	10.26	34.34	26.42	162	1.585
500	10	10.26	34.34	4.22	600	8.01	34.24	26.69	136	1.744
600	10	8.01	34.24	3.00	700	6.54	34.29	26.95	112	1.878
797	20	5.11	34.34	1.62	800	5.09	34.34	27.17	91	1.989
996	20	3.99	34.42	2.10	1000	(3.97)	(34.42)	(27.34)	(75)	(2.173)
KAGOSHIMA MARU; July 27, 1955; 1210-1336 GCT; 21°12'N, 132°01'E; 0902 02 278										522
09x0 1 x x 5850 Pl, La, Ra.										
0	0	27.9	34.34	-	0	27.9	34.34	21.96	587	0.000
10	0	28.84	34.87	4.34	10	28.84	34.87	22.04	579	0.058
25	0	28.74	34.67	4.47	25	28.74	34.67	21.93	590	0.146
50	0	27.44	34.89	4.86	50	27.44	34.89	22.52	534	0.287
75	0	25.96	34.94	4.84	75	25.96	34.94	23.02	485	0.415
100	0	24.67	35.05	4.70	100	24.67	35.05	23.50	440	0.532
150	0	22.69	34.99	4.59	150	22.69	34.99	24.03	390	0.742
200	0	21.24	34.99	4.13	200	21.24	34.99	24.45	349	0.930
250	1	18.26	34.79	4.48	300	17.33	35.01	25.47	252	1.239
300	0	17.33	35.01	4.54	400	14.39	34.52	25.75	226	1.488
400	2	14.39	34.52	4.42	500	11.52	34.34	26.19	184	1.704
500	1	11.52	34.34	4.12	600	8.24	34.20	26.63	142	1.878
600	1	8.24	34.20	3.26	700	6.78	34.20	26.85	121	2.020
802	3	5.28	34.20	2.04	800	5.31	34.20	27.03	104	2.142
1001	3	4.04	34.36	1.79	1000	4.03	34.36	27.30	79	2.344

a) Measurements of plankton, larvae and radioactivity are indicated by Pl, La and Ra, respectively, in the station heading.

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

523 KAGOSHIMA MARU; July 27, 1955; 2226-2356 GCT; 21°52'N, 133°03'E; 1302 03 314
04x0 1 x x 5400 Pl, La.

0	0	28.4	35.14	4.22	0	28.4	35.14	22.39	546	0.000
10	0	28.36	34.36	4.30	10	28.36	34.36	21.82	601	0.057
25	0	28.69	34.47	4.47	25	28.69	34.47	21.79	603	0.148
50	0	23.85	34.76	4.50	50	23.85	34.76	23.52	438	0.278
75	2	22.19	34.81	4.86	75	22.19	34.81	24.04	388	0.382
100	0	21.18	34.81	4.81	100	21.18	34.81	24.33	361	0.477
150	2	20.18	34.81	4.42	150	20.18	34.81	24.59	336	0.653
200	1	18.88	34.81	4.44	200	18.88	34.81	24.92	305	0.817
250	0	17.51	34.83	-	300	16.54	34.72	25.43	256	1.106
300	1	16.54	34.72	4.27	400	13.71	34.56	25.93	209	1.349
400	2	13.71	34.56	3.54	500	10.85	34.34	26.31	173	1.551
500	0	10.85	34.34	3.87	600	7.81	34.13	26.64	141	1.719
600	2	7.81	34.13	3.07	700	6.38	34.20	26.89	117	1.858
800	2	4.95	34.27	1.79	800	4.95	34.27	27.12	96	1.974
998	7	3.99	34.36	1.68	1000	(3.98)	(24.36)	(27.30)	(79)	(2.168)

524 KAGOSHIMA MARU; July 28, 1955; 0805-0932 GCT; 22°24'N, 134°00'E; 0402 02 305
09x0 1 x 2 3200 Pl, La, Ra.

0	0	28.2	35.10	4.30	0	28.2	35.10	22.42	543	0.000
10	0	28.85	34.94	4.19	10	28.85	34.94	22.10	574	0.056
25	0	28.19	34.92	4.33	25	28.19	34.92	22.30	555	0.141
50	0	26.10	34.99	4.74	50	26.10	34.99	23.03	485	0.271
75	2	24.39	34.99	4.86	75	24.39	34.99	23.55	435	0.387
100	1	22.81	35.05	4.71	100	22.81	35.05	24.04	388	0.491
150	0	21.82	34.94	4.39	150	21.82	34.94	24.25	368	0.682
200	0	18.24	34.87	4.34	200	18.24	34.87	25.13	285	0.851
250	0	16.86	35.10	4.21	300	15.80	34.70	25.58	242	1.122
300	0	15.80	34.70	4.06	400	12.88	34.52	26.06	196	1.351
399	7	12.91	34.52	3.78	500	10.07	34.52	26.58	147	1.534
499	6	10.10	34.52	3.28	600	7.12	34.45	26.98	109	1.672
600	12	7.12	34.45	3.26	700	5.78	34.38	27.11	97	1.784
799	17	4.45	34.31	1.99	800	4.45	34.31	27.20	88	1.885
999	8	3.58	34.47	1.91	1000	(3.58)	(34.47)	(27.43)	(66)	(2.055)

525 KAGOSHIMA MARU; July 28, 1955; 1831-2025 GCT; 23°00'N, 135°00'E; 1502 01 294
24x0 1 x 3 5000 Pl, La, Ra.

0	0	28.5	35.05	4.56	0	28.5	35.05	22.30	555	0.000
10	0	28.82	35.07	4.34	10	28.82	35.07	22.18	566	0.056
25	0	28.54	35.10	4.53	25	28.54	35.10	22.32	553	0.140
50	0	28.53	35.10	4.09	50	28.53	35.10	22.33	552	0.279
74	7	23.92	35.19	4.54	75	23.87	35.19	23.84	408	0.399
99	7	22.69	35.03	4.65	100	22.65	35.03	24.09	384	0.499
150	0	20.40	35.17	4.25	150	20.40	35.17	24.79	317	0.674
199	5	18.48	34.87	4.37	200	18.45	34.87	25.08	289	0.829
250	4	17.09	34.72	4.63	300	15.76	34.65	25.56	244	1.103
298	7	15.82	34.65	4.55	400	12.90	34.40	25.96	206	1.338
400	0	12.90	34.40	4.12	500	9.94	34.20	26.36	168	1.535
500	0	9.94	34.20	3.70	600	7.22	34.18	26.78	128	1.693
600	0	7.22	34.18	3.39	700	5.97	34.18	26.94	113	1.823
700	0	5.97	34.18	2.52	800	4.72	34.18	27.08	99	1.938
801	8	4.71	34.18	1.64	1000	3.62	34.34	27.32	77	2.132
1000	13	3.62	34.34	-						

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

KAGOSHIMA MARU; July 29, 1955; 0450-0607 GCT; 24°00'N, 134°42'E; 1304 00 310 526
00x0 2 x 3 4500 Pl, La.

0	0	30.3	34.87	4.33	0	30.3	34.87	21.53	628	0.000
10	0	28.45	34.85	4.48	10	28.45	34.85	22.16	568	0.060
25	0	28.36	34.81	4.31	25	28.36	34.81	22.15	569	0.145
50	0	28.44	34.96	4.62	50	28.44	34.96	22.24	560	0.287
74	7	25.10	34.96	4.91	75	25.07	34.96	23.30	459	0.415
98	9	24.29	34.99	4.95	100	24.17	34.99	23.60	430	0.527
148	9	21.18	35.19	4.31	150	21.12	35.19	24.63	332	0.720
198	8	19.76	35.14	4.20	200	19.70	35.12	24.95	302	0.881
249	4	18.15	34.92	4.69	300	16.78	34.87	25.49	250	1.165
300	10	16.78	34.87	4.56	400	14.30	34.65	25.87	214	1.407
400	13	14.30	34.65	4.43	500	10.47	34.33	26.35	169	1.609
496	22	10.55	34.33	4.15	600	8.37	34.20	26.60	145	1.776
606	15	8.25	34.20	3.65	700	6.53	34.22	26.88	118	1.917
800	9	4.82	34.25	1.88	800	4.82	34.25	27.13	95	2.031
999	8	3.90	34.40	1.87	1000	(3.89)	(34.40)	(27.34)	(75)	(2.215)

KAGOSHIMA MARU; July 29, 1955; 1250-1418 GCT; 24°56'N, 134°27'E; 11-02 02 527
295 00x0 1 x 3 4100.

0	0	28.4	34.56	4.84	0	28.4	34.56	21.95	588	0.000
10	0	28.20	34.67	4.39	10	28.20	34.67	22.10	574	0.058
25	0	28.16	34.54	4.38	25	28.16	34.54	22.02	581	0.145
50	0	26.48	34.78	4.87	50	26.48	34.78	22.74	513	0.293
75	0	22.95	34.90	4.94	75	22.95	34.90	23.90	402	0.408
100	0	21.22	34.90	4.81	100	21.22	34.90	24.38	356	0.504
150	0	20.28	34.85	4.81	150	20.28	34.85	24.59	336	0.680
200	0	19.64	35.01	5.17	200	19.64	35.01	24.89	308	0.844
250	0	17.99	34.90	4.74	300	16.58	34.65	25.37	262	1.137
300	0	16.58	34.65	4.35	400	14.63	34.63	25.80	221	1.389
400	0	14.63	34.63	4.32	500	11.68	34.29	26.12	191	1.627
500	0	11.68	34.29	3.77	600	8.67	34.18	26.55	150	1.879
600	0	8.67	34.18	3.41	700	6.87	34.22	26.84	122	2.075
792	8	5.21	34.24	2.41	800	5.16	34.24	27.08	99	2.195
1000	7	3.99	34.27	1.50	1000	3.99	34.27	27.24	84	2.397

KAGOSHIMA MARU; July 29, 1955; 2245-0010 GCT; 26°00'N, 134°08'E; 1302 03 288 528
14x0 1 x 3 5000 Pl, La, Ra.

0	0	28.4	34.85	4.35	0	28.4	34.85	22.18	566	0.000
10	0	28.41	34.87	4.27	10	28.41	34.87	22.19	565	0.057
25	0	28.27	34.85	4.26	25	28.27	34.85	22.21	563	0.141
50	0	26.71	35.05	4.67	50	26.71	35.05	22.87	500	0.275
75	0	25.51	33.07	4.70	75	25.51	35.07	23.25	464	0.396
100	0	22.98	34.96	4.67	100	22.98	34.96	23.92	400	0.505
150	0	20.35	34.99	4.65	150	20.35	34.99	24.69	327	0.689
200	0	19.32	34.81	4.68	200	19.32	34.81	24.81	315	0.853
250	0	18.65	34.81	4.39	300	17.24	34.67	25.22	276	1.156
300	0	17.24	34.67	4.40	400	15.26	34.60	25.62	238	1.424
400	0	15.26	34.60	4.27	500	12.08	34.36	26.11	192	1.650
500	0	12.08	34.36	4.00	600	9.59	34.20	26.42	162	1.839
598	4	9.64	34.22	3.73	700	7.58	34.15	26.69	136	2.000
800	0	5.57	34.11	2.21	800	5.57	34.11	26.92	115	2.137
1000	0	4.03	34.29	1.45	1000	4.03	34.29	27.24	84	2.355

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	✲°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
529	KAGOSHIMA MARU; July 30, 1955; 0424-0635 GCT; 26°33'N, 133°51'E; 1302 02 314									
00x0 2 38 3 3891 Pl, La, Ra.										
0	0	28.7	34.27	4.46	0	28.7	34.27	21.62	620	0.000
10	3	28.13	34.34	4.44	10	28.13	34.34	21.88	595	0.061
25	5	28.04	34.22	4.47	25	28.04	34.22	21.82	601	0.151
50	4	27.03	34.54	4.59	50	27.03	34.54	22.40	545	0.295
75	0	23.14	34.74	4.96	75	23.14	34.74	23.71	420	0.416
100	0	21.59	34.85	4.79	100	21.59	34.85	24.24	369	0.515
150	0	20.10	34.85	4.54	150	20.10	34.85	24.64	331	0.693
200	0	19.17	34.76	4.78	200	19.17	34.76	24.81	315	0.857
250	0	17.95	34.76	4.29	300	16.64	34.51	25.24	274	1.160
300	0	16.64	34.51	4.36	400	14.64	34.47	25.63	237	1.426
394	10	14.83	34.47	4.25	500	11.55	34.34	26.19	184	1.648
501	15	11.52	34.34	3.95	600	9.04	34.20	26.50	154	1.828
599	8	9.06	34.20	3.53	700	6.98	34.22	26.82	124	1.978
796	20	5.00	34.22	1.82	800	4.98	34.22	27.08	99	2.100
1005	15	3.73	34.42	1.68	1000	3.76	34.42	27.36	73	2.290
530	KAGOSHIMA MARU; July 30, 1955; 1110-1213 GCT; 27°02'N, 133°51'E; 1802 01 302									
00x0 1 x x 4200 Pl, La.										
0	0	28.6	34.33	4.58	0	28.6	34.33	21.71	611	0.000
10	0	27.78	34.25	4.58	10	27.78	34.25	21.92	590	0.060
25	0	27.49	34.20	4.37	25	27.49	34.20	21.98	585	0.149
50	0	24.71	34.18	4.84	50	24.71	34.18	22.84	503	0.285
75	0	22.48	34.90	4.99	75	22.48	34.90	24.02	390	0.397
100	0	21.54	34.89	4.65	100	21.54	34.89	24.29	365	0.493
149	7	19.50	34.83	4.62	150	19.49	34.83	24.78	317	0.666
198	11	18.98	34.81	4.63	200	18.95	34.81	24.92	305	0.825
248	10	17.82	34.76	4.33	300	16.74	34.67	25.34	265	1.118
300	10	16.74	34.67	4.42	400	15.04	34.74	25.78	223	1.373
399	10	15.07	34.74	4.08	500	11.89	34.25	26.05	197	1.595
497	12	11.98	34.25	3.93	600	8.75	34.07	26.46	158	1.784
602	14	8.69	34.07	3.59	700	6.94	34.09	26.74	132	1.941
801	16	5.23	34.09	1.89	800	5.25	34.09	26.95	112	2.074
952	25	3.73	34.07	1.47	1000	(3.25)	(34.07)	(27.15)	(93)	(2.296)
531	KAGOSHIMA MARU; July 30, 1955; 1850-2107 GCT; 28°01'N, 133°37'E; 1402 02 282									
00x0 1 x 3 3700 Pl, La, Ra.										
0	0	27.5	34.18	4.55	0	27.5	34.18	21.97	586	0.000
10	0	27.42	34.07	4.53	10	27.42	34.07	21.92	591	0.059
25	0	25.59	34.52	4.68	25	25.59	34.52	22.81	506	0.141
50	5	24.14	34.72	4.67	50	24.14	34.72	23.41	449	0.261
75	0	21.79	34.81	4.90	75	21.79	34.81	24.15	378	0.365
100	0	21.18	35.03	4.75	100	21.18	35.03	24.48	347	0.457
149	5	19.54	34.85	4.55	150	19.52	34.85	24.78	318	0.625
200	10	18.56	34.67	4.43	200	18.56	34.67	24.90	307	0.785
250	12	17.64	34.63	4.52	300	16.77	34.65	25.31	268	1.081
300	12	16.77	34.65	4.41	400	14.09	34.36	25.69	231	1.340
399	15	14.12	34.36	4.33	500	10.61	34.31	26.32	172	1.552
499	15	10.63	34.31	3.84	600	8.15	34.11	26.57	148	1.723
599	16	8.17	34.11	3.38	700	6.56	34.18	26.86	120	1.867
799	16	4.95	34.25	2.93	800	4.94	34.25	27.11	97	1.985
999	16	3.67	34.34	2.26	1000	(3.66)	(34.34)	(27.31)	(78)	(2.177)

OBSERVED					INTERPOLATED			COMPUTED			
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD	
m	⊀°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	
KAGOSHIMA MARU; July 31, 1955; 0500-0625 GCT; 29°00'N, 133°18'E; 1802 02 318											532
20x0 2 33 3 3200 Pl, La.											
0	0	28.8	34.38	4.39	0	28.8	34.38	21.69	613	0.000	
10	1	27.50	34.49	4.53	10	27.50	34.49	22.20	564	0.059	
25	2	27.10	34.52	4.74	25	27.10	34.52	22.35	550	0.143	
50	3	25.22	34.78	4.89	50	25.22	34.78	23.12	476	0.271	
75	5	21.62	34.96	4.68	75	21.62	34.96	24.32	362	0.377	
100	5	20.49	34.70	4.66	100	20.49	34.70	24.42	352	0.467	
150	3	19.39	34.70	4.77	150	19.39	34.70	24.71	325	0.639	
200	1	18.36	34.67	4.54	200	18.36	34.67	24.96	301	0.799	
250	3	17.26	34.63	4.40	300	16.25	34.63	25.43	256	1.085	
300	2	16.25	34.63	4.27	400	13.81	34.54	25.89	212	1.329	
400	10	13.81	34.54	4.48	500	10.87	34.36	26.32	172	1.532	
490	5	11.13	34.38	3.67	600	8.29	34.25	26.66	139	1.698	
600	10	8.29	34.25	3.19	700	6.65	34.15	26.82	124	1.839	
797	13	5.05	34.04	1.94	800	5.03	34.04	26.92	115	1.968	
999	17	3.92	34.05	1.88	1000	(3.91)	(34.05)	(27.05)	(102)	(2.086)	
KAGOSHIMA MARU; July 31, 1955; 1322-1547 GCT; 30°00'N, 133°00'E; 2401 02 266											533
00x0 1 x x 3200 Pl, La, Ra.											
0	0	27.5	34.15	4.67	0	27.5	34.15	21.94	589	0.000	
10	0	27.51	34.20	4.70	10	27.51	34.20	21.98	585	0.059	
25	0	27.26	34.34	4.45	25	27.26	34.34	22.16	568	0.145	
50	0	26.30	34.31	4.72	50	26.30	34.31	22.44	541	0.284	
75	0	21.81	34.69	5.12	75	21.81	34.69	24.06	387	0.401	
100	0	20.59	34.76	4.90	100	20.59	34.76	24.44	350	0.494	
149	16	19.40	34.81	4.71	150	19.39	34.81	24.79	317	0.663	
208	16	18.75	34.59	4.53	200	18.84	34.63	24.80	316	0.824	
240	29	17.92	34.54	4.45	300	16.39	34.54	25.33	266	1.123	
298	30	16.44	34.54	4.39	400	13.89	34.45	25.81	220	1.376	
389	33	14.11	34.47	4.19	500	11.51	34.29	26.15	188	1.591	
480	32	12.17	34.33	3.89	600	8.32	34.07	26.52	153	1.772	
594	32	8.40	34.07	3.12	700	7.02	34.09	26.72	134	1.926	
853	28	5.02	34.13	1.85	800	5.71	34.11	26.91	116	2.062	
1013	30	3.75	34.09	1.65	1000	3.85	34.13	27.13	95	2.292	
KAGOSHIMA MARU; July 31, 1955; 2245-0123 GCT; 30°38'N, 132°14'E; 2201 03 293											534
22x0 1 x 3 2082 La, Ra.											
0	0	28.1	34.05	4.76	0	28.1	34.05	21.67	615	0.000	
10	3	28.08	34.36	4.59	10	28.08	34.36	21.91	592	0.060	
25	6	27.79	34.20	4.53	25	27.79	34.20	21.88	595	0.150	
50	7	27.31	34.27	4.50	50	27.31	34.27	22.10	574	0.296	
75	5	26.02	34.45	4.63	75	26.02	34.45	22.63	523	0.434	
100	5	24.80	34.67	4.50	100	24.80	34.67	23.18	471	0.559	
150	11	22.01	35.70	4.56	150	22.01	35.70	24.75	321	0.760	
199	10	19.53	34.85	4.60	200	19.45	34.85	24.81	315	0.922	
242	15	16.01	34.72	4.43	300	14.50	34.45	25.67	233	1.204	
295	11	14.62	34.45	4.47	400	12.24	34.33	26.05	197	1.428	
407	11	12.08	34.31	3.76	500	8.83	34.09	26.46	158	1.606	
501	11	8.80	34.09	3.47	600	7.20	34.27	26.84	122	1.755	
599	11	7.21	34.27	2.87	700	5.92	34.25	26.99	108	1.879	
795	11	4.71	34.24	2.05	800	4.68	34.24	27.12	96	1.989	
1021	11	3.53	34.36	1.77	1000	3.64	34.34	27.31	78	2.179	

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	‰	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

KEITEN MARU; July 13, 1955; 0902–0952 GCT; 20°00'N, 130°00'E; 2805 02 283 1 35 2 6000 Pl.[a)] 541

0	0	28.4	34.63	0	28.4	34.63	22.00	583	0.000
10	0	29.88	34.52	10	29.88	34.52	21.44	637	0.061
25	10	28.81	34.61	25	28.81	34.61	21.87	596	0.154
50	3	27.28	34.83	50	27.28	34.83	22.53	533	0.295
75	5	25.54	34.70	75	25.54	34.70	22.97	491	0.423
99	8	24.53	34.90	100	24.48	34.90	23.44	446	0.527
148	9	22.18	34.98	150	22.10	34.96	24.18	375	0.735
198	8	20.25	34.72	200	20.18	34.72	24.52	343	0.918
297	8	16.73	34.61	300	16.64	34.61	25.32	267	1.236
394	10	13.95	34.43	400	13.74	34.43	25.83	218	1.488
470	20	10.97	34.34	500	10.25	34.31	26.39	165	1.690
591	10	7.99	34.22	600	7.77	34.22	26.71	135	1.850
658	20	6.33	34.18	700	(5.32)	(34.16)	(27.00)	(107)	(1.980)

KEITEN MARU; July 13, 1955; 1610–1659 GCT; 21°08'N, 129°56'E; 2405 03 285 1 x x 6000 Pl. 542

0	0	28.8	34.67	0	28.8	34.67	21.91	592	0.000
10	0	28.98	34.54	10	28.98	34.54	21.75	607	0.060
25	0	28.80	34.69	25	28.80	34.69	21.92	591	0.150
50	4	26.56	34.98	50	26.56	34.98	22.87	500	0.287
74	9	25.14	34.99	75	25.12	34.99	23.32	457	0.407
97	13	24.68	-	100	24.52	35.01	23.51	439	0.521
140	22	22.19	35.05	150	21.75	35.03	24.34	360	0.722
195	13	19.76	34.90	200	19.56	34.89	24.80	316	0.894
292	13	15.89	34.70	300	15.74	34.70	25.61	239	1.180
371	22	14.28	34.65	400	13.32	34.63	26.06	192	1.406
433	30	12.23	34.58	500	10.70	34.40	26.39	165	1.596
556	22	9.46	34.25	600	8.48	34.36	26.72	134	1.756
606	30	8.34	34.38	700	(6.23)	(34.60)	(27.22)	(86)	(1.876)

KEITEN MARU; July 14, 1955; 0705–0753 GCT; 23°03'N, 129°58'E; 1805 02 304 1 38 2 5000 Pl. 543

0	0	28.5	34.74	0	28.5	34.74	22.05	579	0.000
10	0	28.69	34.63	10	28.69	34.63	21.92	591	0.059
25	0	28.59	34.65	25	28.59	34.65	21.96	587	0.147
50	0	26.36	34.79	50	26.36	34.79	22.79	508	0.284
75	0	24.75	34.98	75	24.75	34.98	23.42	448	0.405
95	18	23.67	34.74	100	23.50	34.76	23.62	429	0.515
145	15	21.99	34.98	150	21.85	34.98	24.27	367	0.717
189	19	20.81	-	200	20.43	34.92	24.60	335	0.895
285	18	17.38	34.85	300	17.10	34.87	25.41	258	1.200
376	20	15.63	34.96	400	15.27	34.83	25.80	221	1.450
473	19	14.15	34.47	500	12.91	34.43	25.99	203	1.674
564	20	9.94	34.34	600	8.99	34.29	26.58	147	1.861
662	19	7.35	34.20	700	(6.35)	(34.15)	(26.87)	(119)	(2.004)

a) Measurements of plankton and larvae are indicated by Pl and La, respectively, in the station heading.

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	x°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

544 KEITEN MARU; July 14, 1955; 1232-1329 GCT; 24°01'N, 130°00'E; 2205 02 279 1 x x 4500 Pl.

0	0	28.2	34.65	0	28.2	34.65	22.09	575	0.000
10	0	28.39	34.51	10	28.39	34.51	21.92	591	0.058
25	0	28.29	34.52	25	28.29	34.52	21.96	587	0.147
49	11	27.21	34.65	50	27.12	34.65	22.45	540	0.288
74	8	25.01	34.89	75	24.91	34.89	23.30	458	0.413
93	21	23.20	34.85	100	22.96	34.85	23.86	408	0.523
144	16	21.35	34.89	150	21.21	34.89	24.38	356	0.716
193	15	20.20	34.85	200	20.00	34.85	24.67	328	0.891
280	21	17.64	34.76	300	17.08	34.74	25.31	268	1.197
370	22	15.09	34.65	400	14.45	34.61	25.81	220	1.451
495	8	12.36	34.42	500	12.13	34.40	26.12	191	1.668
556	22	9.47	34.18	600	8.76	34.13	26.49	155	1.852
693	8	7.26	34.04	700	(7.15)	(34.04)	(26.66)	(139)	(2.010)

545 KEITEN MARU; July 14, 1955; 1958-2035 GCT; 25°02'N, 129°56'E; 1605 02 280 1 x x 4517 Pl.

0	0	28.0	34.74	0	28.0	34.74	22.21	563	0.000
10	5	28.23	34.61	10	28.23	34.61	22.05	579	0.057
25	5	28.25	34.65	25	28.25	34.65	22.08	576	0.144
50	3	24.60	34.65	50	24.60	34.65	23.23	466	0.275
75	5	23.74	34.63	75	23.74	34.63	23.45	445	0.389
98	11	22.67	34.87	100	22.60	34.87	23.98	394	0.495
150	0	20.84	34.90	150	20.84	34.90	24.48	347	0.682
200	0	19.60	34.85	200	19.60	34.85	24.78	318	0.851
295	11	16.86	34.70	300	16.77	34.70	25.37	262	1.149
399	4	15.06	34.69	400	15.03	34.69	25.74	227	1.404
497	6	11.96	34.29	500	11.86	34.29	26.09	193	1.626
599	4	8.86	34.20	600	8.84	34.20	26.53	152	1.810
696	6	6.73	34.15	700	(6.65)	(34.15)	(26.82)	(124)	(1.959)

546 KEITEN MARU; July 15, 1955; 0405-0445 GCT; 26°00'N, 130°00'E; 1605 02 289 2 39 2 5320 Pl.

0	0	29.2	34.60	0	29.2	34.60	21.72	610	0.000
10	0	28.24	34.58	10	28.24	34.58	22.03	580	0.060
25	0	28.12	34.65	25	28.12	34.65	22.11	573	0.146
50	0	23.95	34.69	50	23.95	34.69	23.44	446	0.274
75	0	22.33	34.89	75	22.33	34.89	24.05	388	0.379
99	7	21.50	34.87	100	21.48	34.87	24.28	366	0.474
148	9	20.26	34.79	150	20.21	34.79	24.57	338	0.653
199	6	18.77	34.76	200	18.74	34.76	24.92	305	0.817
298	7	16.23	34.76	300	16.18	34.76	25.54	246	1.101
385	16	13.92	34.54	400	13.49	34.51	25.93	209	1.339
495	8	10.82	34.33	500	10.65	34.31	26.31	173	1.541
577	16	8.04	34.07	600	7.78	34.09	26.64	141	1.709
693	8	6.70	34.18	700	(6.62)	(34.18)	(26.85)	(121)	(1.851)

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	✲°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

KEITEN MARU; July 15, 1955; 1125-1212 GCT; 27°00'N, 129°57'E; 1806 02 289 1 x x 5000 Pl. 547

0	0	28.3	34.54	0	28.3	34.54	22.00	583	0.000
10	0	28.71	34.56	10	28.71	34.56	21.86	597	0.059
25	0	28.19	34.54	25	28.19	34.54	22.01	582	0.148
50	0	24.97	34.58	50	24.97	34.58	23.05	483	0.281
75	5	23.39	34.70	75	23.39	34.70	23.61	429	0.396
99	9	22.52	34.85	100	22.48	34.85	23.99	393	0.500
149	5	20.64	34.89	150	20.62	34.89	24.52	343	0.682
200	2	19.77	34.81	200	19.77	34.81	24.71	325	0.857
296	9	17.35	34.72	300	17.28	34.72	25.25	273	1.164
400	0	15.39	34.65	400	15.39	34.65	25.63	237	1.430
498	5	12.25	34.38	500	12.22	34.38	26.09	193	1.657
600	0	10.84	34.33	600	10.84	34.33	26.30	173	1.852
697	5	7.57	34.07	700	(7.47)	(34.07)	(26.63)	(142)	(2.022)

KEITEN MARU; July 15, 1955; 1815-1912 GCT; 27°59'N, 129°50'E; 1809 02 281 1 x x 860 Pl. 548

0	0	27.9	34.45	0	27.9	34.45	22.03	580	0.000
10	7	27.98	34.42	10	27.98	34.42	21.99	584	0.058
25	7	27.41	34.43	25	27.41	34.43	22.18	566	0.145
49	10	23.89	34.74	50	23.87	34.74	23.50	440	0.271
73	14	23.35	34.78	75	23.29	34.78	23.70	421	0.379
97	15	22.59	34.79	100	22.45	34.79	23.94	399	0.483
144	16	20.86	34.89	150	20.72	34.87	24.49	346	0.672
193	15	19.73	34.79	200	19.57	34.78	24.72	324	0.843
290	15	17.51	34.58	300	17.25	34.58	25.15	283	1.155
386	15	15.01	34.52	400	14.51	34.47	25.69	231	1.422
460	23	12.36	34.27	500	11.23	34.22	26.15	188	1.643
564	20	9.41	34.15	600	8.68	34.16	26.53	152	1.824
644	23	7.77	34.22	700	(6.52)	(34.27)	(26.93)	(114)	(1.967)

KEITEN MARU; July 17, 1955; 0205-0245 GCT; 29°00'N, 129°51'E; 1209 02 285 2 19 3 750 Pl. 549

0	0	28.6	34.47	0	28.6	34.47	21.82	601	0.000
10	4	28.59	34.54	10	28.59	34.54	21.89	594	0.060
25	8	28.59	34.61	25	28.59	34.61	21.94	589	0.149
50	8	27.32	34.56	50	27.32	34.56	22.30	555	0.292
70	22	25.77	34.63	75	25.59	34.67	22.92	495	0.424
87	29	25.13	34.79	100	24.54	34.79	23.34	455	0.544
131	29	23.11	34.81	150	23.08	34.79	23.78	413	0.763
175	29	23.03	34.76	200	21.92	34.78	24.10	383	0.965
270	26	18.78	34.85	300	17.44	34.96	25.40	259	1.294
339	32	15.69	35.07	400	13.84	34.38	25.76	225	1.546
389	39	14.21	34.47	500	10.68	34.36	26.35	169	1.754
509	32	10.39	34.34	600	(7.49)	(34.25)	(26.79)	(127)	(1.912)

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

550 KEITEN MARU; July 17, 1955; 1113-1200 GCT; 30°02'N, 130°11'E; 0914 01 282 1 x x 611 Pl.

0	0	27.7	34.22		0	27.7	34.22	21.92	591	0.000
9	19	27.58	34.31		10	27.58	34.31	22.03	580	0.059
24	19	27.53	34.34		25	27.49	34.34	22.09	575	0.145
44	29	26.74	34.51		50	26.26	34.52	22.72	514	0.282
69	24	24.76	34.56		75	24.28	34.58	23.26	463	0.405
74	42	24.36	34.58		100	22.33	34.60	23.85	407	0.514
129	31	20.07	34.61		150	20.66	34.60	24.30	364	0.709
158	38	20.89	34.60		200	16.50	34.51	25.28	270	0.871
230	40	13.36	34.45		300	10.97	34.25	26.22	181	1.103
315	38	10.45	34.22		400	8.13	34.05	26.53	152	1.276
383	40	8.59	34.09		500	(5.40)	(33.87)	(26.76)	(130)	(1.423)

551 KEITEN MARU; August 18, 1955; 1805-1920 GCT; 26°05'N, 127°53'E; 1406 01 278 1 x xx 700.

0	0	28.0	34.34		0	28.0	34.34	21.91	592	0.000
10	0	28.09	34.54		10	28.09	34.54	22.04	579	0.059
25	3	28.06	34.51		25	28.06	34.51	22.02	581	0.146
50	3	26.06	34.60		50	26.06	34.60	22.73	514	0.238
75	3	24.54	34.85		75	24.54	34.85	23.39	450	0.404
100	5	23.03	34.87		100	23.03	34.87	23.84	408	0.513
149	5	22.02	34.90		150	21.99	34.90	24.18	375	0.711
199	5	20.75	34.87		200	20.71	34.87	24.49	346	0.895
297	8	17.20	34.67		300	17.14	34.67	25.25	273	1.213
396	8	15.09	34.61		400	14.96	34.61	25.70	230	1.475
487	13	12.10	34.47		500	11.77	34.45	26.23	180	1.692
585	13	9.66	34.27		600	(9.28)	(34.25)	(26.51)	(154)	(1.870)

552 KEITEN MARU; August 18, 1955; 2245-0031 GCT; 25°50'N, 128°28'E; 1404 02 287 1 40 2 2250.

0	0	28.4	34.42	-	0	28.4	34.42	21.85	598	0.000
10	0	28.37	34.33	4.58	10	28.37	34.33	21.80	603	0.060
25	3	28.07	34.43	4.47	25	28.07	34.43	21.96	587	0.150
50	3	26.28	34.61	4.51	50	26.28	34.61	22.69	517	0.288
75	3	25.96	34.85	4.49	75	25.96	34.85	22.95	493	0.415
100	5	23.62	34.87	4.37	100	23.62	34.87	23.68	423	0.531
149	5	22.06	34.89	4.28	150	22.03	34.89	24.14	379	0.734
199	5	20.61	34.89	4.18	200	20.58	34.89	24.54	341	0.917
297	8	-	34.72	4.15	300	17.10	34.72	25.30	268	1.230
396	8	13.77	34.67	4.03	400	13.64	34.65	25.99	203	1.476
487	13	10.71	34.34	3.43	500	10.45	34.34	26.37	167	1.672
585	13	8.59	34.29	2.88	600	8.33	34.29	26.69	136	1.834
649	22	7.50	34.29	3.09	700	6.81	34.29	26.90	117	1.971
742	22	6.24	34.29	2.52	800	5.29	34.29	27.10	98	2.088
821	24	4.96	34.29	2.22						

OBSERVED					INTERPOLATED			COMPUTED			
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD	
m	×°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	
KEITEN MARU; August 19, 1955; 0413-0543 GCT; 25°42'N, 129°01'E; 0608 03 306 2											553
35 2 3750 Pl.											
0	0	28.3	34.47	4.38	0	28.3	34.47	21.92	591	0.000	
10	9	28.78	34.43	4.34	10	28.78	34.43	21.74	608	0.060	
25	11	28.74	34.49	4.29	25	28.74	34.49	21.80	603	0.150	
49	11	27.78	34.56	4.61	50	27.72	34.56	22.19	565	0.297	
73	12	26.32	34.78	4.68	75	26.25	34.79	22.82	505	0.431	
97	15	25.51	34.90	4.98	100	25.36	34.90	23.18	471	0.554	
143	18	23.24	34.98	-	150	22.98	34.98	23.93	399	0.774	
188	20	21.57	34.87	4.66	200	21.14	34.87	24.38	356	0.966	
292	13	17.77	34.74	4.71	300	17.52	34.74	25.21	277	1.291	
390	13	14.63	34.69	4.28	400	14.26	34.63	25.85	216	1.548	
470	20	11.71	34.38	3.77	500	11.06	34.36	26.29	174	1.754	
564	20	9.66	34.27	3.15	600	8.72	34.27	26.62	143	1.924	
658	20	7.20	34.24	2.89	700	6.57	34.20	26.86	120	2.066	
752	20	5.74	34.11	2.24	800	5.54	34.22	27.01	106	2.189	
840	21	5.24	34.33	1.97							
KEITEN MARU; August 19, 1955; 0900-1015 GCT; 25°30'N, 129°28'E; 0905 02 287 1											554
35 2 4680.											
0	0	28.6	34.51	4.61	0	28.6	34.51	21.85	598	0.000	
10	2	29.03	34.52	4.60	10	29.03	34.52	21.72	610	0.060	
25	4	28.82	34.45	4.75	25	28.82	34.45	21.73	609	0.152	
50	4	28.01	34.42	4.85	50	28.01	34.42	21.98	585	0.302	
75	4	26.04	34.43	4.93	75	26.04	34.43	22.61	525	0.441	
98	12	25.03	34.85	4.85	100	24.95	34.85	23.26	463	0.566	
147	12	23.04	34.90	4.80	150	22.94	34.90	23.89	403	0.785	
193	15	21.52	34.98	4.40	200	21.20	34.96	24.43	351	0.977	
269	26	18.13	34.76	4.41	300	17.01	34.69	25.29	269	1.296	
359	26	14.87	34.56	4.25	400	13.04	34.42	25.95	207	1.544	
433	30	11.55	34.31	4.23	500	9.74	34.34	26.50	154	1.734	
520	30	9.20	34.36	3.80	600	7.25	34.31	26.86	120	1.876	
594	32	7.35	34.31	2.95	700	5.64	34.31	27.07	100	1.995	
678	32	5.91	34.31	2.15	800	(4.39)	(34.29)	(27.20)	(88)	(2.097)	
763	32	4.85	34.29	2.06							
KEITEN MARU; August 18, 1955; 1300-1419 GCT; 25°21'N, 129°56'E; 1214 01 290 1											555
x x 4900 Pl, La.											
0		28.7	34.61	4.35	0	28.7	34.61	21.95	588	0.000	
10	0	28.85	34.52	4.55	10	28.85	34.52	21.78	604	0.060	
25	0	28.92	34.51	4.41	25	28.92	34.51	21.72	610	0.151	
50	0	27.76	34.61	4.54	50	27.76	34.61	22.20	564	0.298	
75	0	26.73	34.70	4.61	75	26.73	34.70	22.61	525	0.435	
95	18	25.90	34.79	4.51	100	25.71	34.83	23.10	478	0.561	
142	18	24.08	35.16	4.37	150	23.75	35.17	23.86	406	0.785	
181	25	22.47	35.23	4.40	200	21.65	35.17	24.48	347	0.976	
274	24	18.47	34.92	4.29	300	17.55	34.85	25.29	269	1.293	
365	24	15.24	34.67	4.37	400	14.42	34.60	25.81	220	1.548	
465	22	12.91	34.47	4.31	500	11.94	34.47	26.22	181	1.760	
558	22	10.34	34.45	3.54	600	8.68	34.43	26.74	132	1.928	
611	30	8.25	34.43	3.30	700	6.29	34.22	26.93	114	2.061	
696	30	6.33	34.22	3.06	800	(5.17)	(34.40)	(27.20)	(88)	(2.172)	
755	33	5.67	34.33	2.10							

	OBSERVED					INTERPOLATED			COMPUTED		
	Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
	m	⊀°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
556	KEITEN MARU; August 19, 1955; 1755-1910 GCT; 25°11'N, 130°27'E; 1205 03 280 1 x x 3200 La.										
	0	0	28.8	34.20	4.35	0	28.8	34.20	21.42	639	0.000
	10	2	29.09	34.36	4.55	10	29.09	34.36	21.58	624	0.063
	25	2	27.69	34.43	4.51	25	27.69	34.43	22.10	574	0.153
	50	3	26.65	34.78	5.12	50	26.65	34.78	22.68	518	0.295
	75	3	25.50	34.83	4.62	75	25.50	34.83	23.08	480	0.426
	99	7	24.27	34.98	4.31	100	24.24	34.98	23.57	433	0.541
	148	8	22.72	34.96	4.40	150	22.66	34.96	24.01	391	0.749
	198	8	21.01	34.96	4.26	200	20.95	34.96	24.50	345	0.937
	294	11	17.90	34.85	4.29	300	17.76	34.83	25.22	276	1.156
	396	11	15.58	34.69	-	400	15.47	34.69	25.64	236	1.523
	498	5	12.85	34.56	3.51	500	12.79	34.56	26.12	191	1.749
	598	5	9.60	34.42	3.57	600	9.56	34.42	26.59	146	1.930
	691	9	7.65	34.43	-	700	7.48	34.42	26.91	116	2.073
	790	9	5.82	34.29	2.28	800	5.73	34.29	27.05	102	2.193
	880	12	4.97	34.29	1.96						
557	KEITEN MARU; August 19, 1955; 2310-0017 GCT; 25°00'N, 130°58'E; 0905 02 300 1 37 3 3000.										
	0	0	29.0	34.40	4.39	0	29.0	34.40	21.65	617	0.000
	10	3	28.78	34.36	4.44	10	28.78	34.36	21.69	613	0.062
	25	5	28.70	34.42	-	25	28.70	34.42	21.75	607	0.153
	50	5	28.24	34.81	4.90	50	28.24	34.81	22.20	564	0.300
	75	5	24.89	34.85	4.65	75	24.89	34.85	23.28	461	0.429
	100	5	23.68	34.96	4.13	100	23.68	34.96	23.73	418	0.540
	148	9	21.03	34.98	4.24	150	20.97	34.99	24.51	344	0.733
	196	9	19.58	34.00	4.32	200	19.47	34.99	24.91	306	0.899
	290	15	17.05	34.79	4.32	300	16.84	34.79	25.41	258	1.189
	386	15	14.92	34.74	4.23	400	14.56	34.69	25.85	216	1.437
	470	20	12.68	34.42	4.16	500	11.64	34.38	26.20	183	1.648
	564	20	9.42	34.33	4.32	600	8.84	34.31	26.62	143	1.822
	689	10	7.41	34.24	-	700	7.25	34.24	26.80	126	1.968
	789	10	5.94	34.25	2.14	800	5.81	34.25	27.01	106	2.095
	886	10	4.76	34.31	1.55						
558	KEITEN MARU; August 20, 1955; 0420-0513 GCT; 24°44'N, 131°27'E; 0908 02 309 2 28 2 5700 Pl.										
	0	0	29.2	34.45	4.52	0	29.2	34.45	21.60	622	0.000
	10	14	28.60	34.43	4.70	10	28.60	34.43	21.79	603	0.062
	24	15	28.29	34.45	4.99	25	28.27	34.45	21.90	593	0.151
	49	12	27.82	34.54	4.44	50	27.72	34.54	22.16	568	0.297
	73	12	25.35	34.70	4.67	75	25.18	34.72	23.09	479	0.428
	98	12	23.26	34.98	4.84	100	23.18	34.98	23.88	404	0.540
	147	12	21.24	34.96	4.53	150	21.15	34.96	24.44	350	0.731
	196	12	19.74	34.96	4.37	200	19.63	34.96	24.83	313	0.900
	276	23	17.64	34.87	4.37	300	17.03	34.83	25.40	259	1.244
	368	23	15.25	34.72	4.38	400	14.50	34.65	25.83	218	1.543
	467	21	12.91	34.51	4.22	500	11.89	34.47	26.23	180	1.753
	560	21	9.95	34.40	3.66	600	7.78	34.16	26.66	139	1.923
	618	28	6.80	34.13	3.09	700	6.05	34.25	26.99	108	2.056
	706	28	5.99	34.25	2.25	800	(4.69)	(34.24)	(27.12)	(96)	(2.167)
	779	30	4.97	34.18	1.62						

OBSERVED					INTERPOLATED			COMPUTED			
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD	
m	∠°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	

KEITEN MARU; August 20, 1955; 0840–0946 GCT; 24°42'N, 131°56'E; 0908 03 300 1 38 3 2500. 559

0	0	28.9	34.78	4.42	0	28.9	34.78	21.96	587	0.000
10	0	28.96	34.70	5.00	10	28.96	34.70	21.89	594	0.059
25	5	28.68	34.67	4.85	25	28.68	34.67	21.95	588	0.148
49	10	28.27	34.72	4.50	50	28.26	34.74	22.13	571	0.293
74	10	28.06	34.92	5.36	75	27.87	34.92	22.40	545	0.434
98	10	23.50	35.03	5.02	100	23.42	35.03	23.84	408	0.554
148	10	21.38	34.96	4.83	150	21.34	34.96	24.39	355	0.747
197	10	20.46	35.12	5.10	200	20.37	35.12	24.76	320	0.919
290	15	17.61	35.01	4.62	300	17.35	34.98	25.43	256	1.215
386	15	15.16	34.78	4.37	400	14.70	34.74	25.86	215	1.461
476	18	12.23	34.56	4.03	500	11.54	34.52	26.33	171	1.666
571	18	9.50	34.42	3.57	600	8.60	34.34	26.68	137	1.832
640	24	7.15	34.24	2.95	700	6.40	34.33	26.99	108	1.965
731	24	6.01	34.36	2.12	800	5.43	34.27	27.06	101	2.079
822	29	5.24	34.25	1.85						

KEITEN MARU; August 20, 1955; 1836–1956 GCT; 26°01'N, 132°00'E; 1205 02 285 1 x x 1310 Pl, La. 560

0	0	28.4	34.51	4.30	0	28.4	34.51	21.92	591	0.000
10	0	28.79	34.42	4.55	10	28.79	34.42	21.72	610	0.060
25	0	27.85	34.51	5.02	25	27.85	34.51	22.10	574	0.149
50	5	26.77	34.78	4.87	50	26.77	34.78	22.65	521	0.286
75	5	24.52	34.79	4.90	75	24.52	34.79	23.35	454	0.409
99	10	22.85	34.81	4.98	100	22.80	34.81	23.86	406	0.517
145	15	20.68	35.07	4.78	150	20.54	35.05	24.68	327	0.703
193	15	19.30	34.87	4.92	200	19.12	34.85	24.89	308	0.865
272	25	17.22	34.69	4.53	300	16.50	34.67	25.40	259	1.147
363	25	14.80	34.61	4.47	400	13.78	34.56	25.91	211	1.392
457	24	12.20	34.47	4.14	500	11.12	34.42	26.32	172	1.595
548	24	9.90	34.36	3.86	600	8.52	34.31	26.67	138	1.761
639	24	7.49	34.27	3.01	700	6.53	34.34	26.98	109	1.895
731	24	6.04	34.36	2.29	800	5.30	34.24	27.05	102	2.010
828	23	5.00	34.22	2.31						

KEITEN MARU; August 21, 1955; 0407–0441 GCT; 27°21'N, 131°58'E; 1605 03 295 2 34 1 4300 Pl. 561

0	0	29.1	34.40	4.61	0	29.1	34.40	21.60	622	0.000
10	0	28.30	34.56	4.53	10	28.30	34.56	22.00	583	0.060
25	0	27.97	34.42	4.53	25	27.97	34.42	21.99	584	0.148
50	0	24.35	34.74	4.54	50	24.35	34.74	23.37	452	0.278
75	0	22.13	34.85	4.53	75	22.13	34.85	24.09	384	0.383
100	0	21.94	34.83	4.53	100	21.94	34.83	24.13	380	0.480
150	0	18.79	34.98	4.67	150	18.79	34.98	25.07	290	0.650
200	0	17.85	35.05	4.37	200	17.85	35.05	25.37	262	0.791
252	33	16.47	34.81	4.35	300	14.95	34.72	25.80	221	1.040
335	33	13.86	34.65	4.10	400	12.16	34.58	26.26	177	1.249
467	21	10.40	34.49	3.75	500	9.69	34.42	26.57	148	1.422
560	21	8.39	34.33	3.18	600	7.62	34.18	26.71	135	1.574
606	30	7.51	34.16	2.75	700	5.18	34.27	27.10	98	1.700
693	30	5.25	34.25	2.12	800	(4.05)	(34.52)	(27.42)	(67)	(1.790)
763	32	4.46	34.43	1.80						

FFKU

NORPAC

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	✲°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

562

KEITEN MARU; August 21, 1955; 0814–0915 GCT; 27°27'N, 131°30'E; 1605 02 310 1 33 3 4750 Pl.

0	0	28.5	34.22	4.84	0	28.5	34.22	21.70	612	0.000
10	3	29.11	34.11	4.62	10	29.11	34.11	21.39	642	0.063
25	3	28.57	34.16	4.91	25	28.57	34.16	21.60	622	0.158
50	5	28.15	34.69	-	50	28.15	34.69	22.14	570	0.307
74	5	25.45	34.78	4.64	75	25.40	34.79	23.09	479	0.439
95	18	24.38	35.01	4.75	100	24.07	35.01	23.65	426	0.553
143	18	21.38	34.99	4.85	150	21.01	34.98	24.49	346	0.749
187	21	19.01	34.87	4.35	200	18.73	34.85	25.00	297	0.913
252	33	17.61	34.79	4.28	300	16.45	34.70	25.43	256	1.197
335	33	15.61	34.65	4.43	400	13.54	34.60	25.99	203	1.437
410	35	13.23	34.58	3.95	500	10.56	34.43	26.42	162	1.631
491	35	10.62	34.43	3.57	600	7.45	34.31	26.83	123	1.784
573	35	8.11	34.36	3.14	700	5.92	34.24	26.98	109	1.909
655	35	6.12	34.20	2.73	800	(5.50)	(34.33)	(27.10)	(98)	(2.022)
763	32	5.66	34.29	2.40						

563

KEITEN MARU; August 21, 1955; 1230–1345 GCT; 27°29'N, 130°59'E; 1805 02 283 1 x x 5370 Pl, La.

0	0	28.7	34.45	4.76	0	28.7	34.45	21.77	605	0.000
10	0	28.54	34.45	4.38	10	28.54	34.45	21.82	601	0.060
25	0	28.61	34.36	4.46	25	28.61	34.36	21.74	608	0.151
50	0	27.57	34.76	4.69	50	27.57	34.76	22.36	549	0.296
75	0	26.85	34.79	4.78	75	26.85	34.79	22.62	524	0.431
100	0	24.54	34.99	4.51	100	24.54	34.99	23.50	440	0.552
150	0	21.70	35.01	4.67	150	21.70	35.01	24.33	361	0.755
190	18	20.28	34.98	4.34	200	19.99	34.96	24.75	321	0.927
285	18	17.50	34.85	4.37	300	17.20	34.81	25.33	266	1.231
380	18	15.60	34.74	4.50	400	15.03	34.70	25.76	225	1.487
470	20	13.16	34.49	4.54	500	12.32	34.49	26.17	186	1.704
564	20	10.52	34.40	3.63	600	9.48	34.34	26.54	151	1.879
634	25	8.48	34.25	3.39	700	7.20	34.27	26.84	122	2.026
725	25	6.72	34.29	2.69	800	(5.53)	(34.36)	(27.13)	(95)	(2.145)
799	30	5.54	34.36	2.09						

564

KEITEN MARU; August 21, 1955; 1720–1825 GCT; 27°40'N, 130°25'E; 1408 00 283 1 x x 5360 Pl, La.

0	0	28.8	34.18	4.64	0	28.8	34.18	21.52	629	0.000
10	0	28.90	34.56	4.70	10	28.90	34.56	21.80	603	0.062
25	0	28.55	34.33	4.54	25	28.55	34.33	21.73	609	0.153
50	0	28.07	34.58	4.67	50	28.07	34.58	22.09	575	0.301
75	0	26.98	34.70	4.88	75	26.98	34.70	22.52	534	0.441
100	0	24.94	34.94	4.66	100	24.94	34.94	23.32	457	0.565
150	0	22.60	34.99	4.47	150	22.60	34.99	24.05	388	0.779
200	0	20.68	34.96	4.55	200	20.68	34.96	24.56	339	0.964
282	20	18.20	34.92	4.37	300	17.80	34.90	25.28	270	1.277
376	20	16.12	34.81	4.23	400	15.55	34.67	25.62	238	1.542
476	18	13.73	34.70	3.98	500	13.03	34.63	26.12	191	1.769
571	18	10.95	34.45	3.70	600	9.95	34.42	26.52	153	1.954
653	21	8.12	34.33	3.13	700	7.04	34.31	26.89	117	2.101
747	21	5.95	34.29	2.37	800	5.25	34.33	27.13	95	2.217
816	25	5.04	34.34	1.71						

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	ϰ°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

KEITEN MARU; August 21, 1955; 2115-2232 GCT; 27°53'N, 130°02'E; 1605 03 282 1 32 1 2200 Pl. 565

0	0	28.4	34.54	4.87	0	28.4	34.54	21.94	589	0.000
10	3	28.49	34.47	4.58	10	28.49	34.47	21.86	597	0.059
25	3	28.11	34.60	4.42	25	28.11	34.60	22.08	576	0.147
50	10	27.85	34.43	4.55	50	27.85	34.43	22.04	579	0.292
74	10	27.16	34.63	4.66	75	27.04	34.65	22.47	538	0.433
98	10	24.29	34.90	4.87	100	24.21	34.90	23.52	438	0.556
148	10	22.35	35.01	4.00	150	22.28	35.03	24.18	375	0.762
197	10	20.71	35.10	4.40	200	20.63	35.10	24.69	327	0.941
287	17	18.38	34.98	4.17	300	18.05	34.94	25.23	275	1.251
382	17	15.93	34.78	4.29	400	15.49	34.74	25.69	231	1.515
478	17	13.56	34.54	3.82	500	12.83	34.47	26.04	198	1.742
574	17	10.36	34.34	3.46	600	9.73	34.34	26.50	154	1.930
658	20	8.31	34.34	-	711	7.18	34.33	26.89	117	2.077
752	20	5.79	34.29	1.84	800	5.28	34.34	27.14	94	2.193
846	20	4.79	34.40	1.88	1000	(4.22)	(34.58)	(27.45)	(64)	(2.371)

KEITEN MARU; August 22, 1955; 0128-0211 GCT; 28°03'N, 129°31'E; 1805 01 289 2 30 2 650 Pl. 566

0	0	29.2	34.49	4.58	0	29.2	34.49	21.63	619	0.000
10	0	28.62	34.33	4.63	10	28.62	34.33	21.70	612	0.062
25	0	28.05	34.31	4.64	25	28.05	34.31	21.89	594	0.152
50	0	26.57	34.54	4.80	50	26.57	34.54	22.52	534	0.294
75	0	25.28	34.63	4.94	75	25.28	34.63	23.00	488	0.422
100	0	23.83	34.76	4.63	100	23.83	34.76	23.52	438	0.539
150	0	22.67	34.79	4.75	150	22.67	34.79	23.89	403	0.752
200	0	20.72	34.81	4.46	200	20.72	34.81	24.45	349	0.944
276	23	19.04	34.79	4.44	300	18.37	34.76	25.01	296	1.275
368	23	16.47	34.65	4.47	400	15.35	34.58	25.60	240	1.554
433	30	14.19	34.49	4.37	500	(12.09)	(34.33)	(26.08)	(194)	(1.783)
520	30	11.46	-	3.98						

KEITEN MARU; August 23, 1955; 0730-1135 GCT; 28°17'N, 129°00'E; 1605 02 288 1 30 2 870 Pl. 567

0	0	28.1	34.33	-	0	28.1	34.33	21.88	595	0.000
10	10	27.76	34.36	4.72	10	27.76	34.36	22.01	582	0.059
25	10	27.33	34.38	5.02	25	27.33	34.38	22.16	568	0.145
48	18	27.16	34.40	4.93	50	27.05	34.40	22.27	558	0.187
71	18	25.83	34.49	4.99	75	25.36	34.52	22.86	501	0.320
90	26	24.04	34.63	4.61	100	23.69	34.65	23.49	441	0.438
135	26	22.44	34.70	4.71	150	21.79	34.72	24.10	383	0.647
180	26	20.47	34.74	4.63	200	19.83	34.72	24.62	333	0.829
276	23	17.31	34.61	4.45	300	16.71	34.58	25.27	271	1.140
368	23	14.99	34.49	4.24	400	14.17	34.43	25.73	228	1.399
450	26	12.88	34.34	3.85	500	11.00	34.33	26.28	175	1.561
540	26	9.49	34.33	3.17	600	7.86	34.22	26.70	135	1.727
587	33	8.03	34.22	2.85	700	(6.55)	(34.22)	(26.88)	(118)	(1.864)
693	30	6.64	34.22	2.59	800	(5.24)	(34.22)	(27.04)	(103)	(1.984)

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	ϕ°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
568	KEITEN MARU; August 23, 1955; 1135–1230 GCT; 28°27'N, 128°29'E; 1805 02 289 1 x x 1300 Pl, La.									
0	0	28.4	34.72	4.76	0	28.4	34.72	22.08	576	0.000
10	0	28.04	34.56	4.78	10	28.04	34.56	22.09	575	0.058
25	0	27.35	34.54	4.70	25	27.35	34.54	22.30	555	0.143
50	0	26.23	34.65	4.95	50	26.23	34.65	22.72	514	0.277
75	0	25.40	34.79	4.80	75	25.40	34.79	23.08	480	0.402
99	6	23.61	34.85	4.60	100	23.57	34.85	23.68	423	0.515
149	6	21.82	35.07	4.35	150	21.80	35.05	24.34	360	0.714
199	6	20.68	35.08	4.54	200	20.65	35.07	24.65	330	0.800
280	21	18.59	35.01	4.36	300	17.93	34.96	25.28	270	1.199
373	21	15.48	34.79	4.23	400	14.83	34.74	25.84	217	1.454
478	17	12.95	34.58	3.69	500	12.16	34.54	26.24	179	1.665
574	17	9.42	34.45	2.80	600	8.80	34.43	26.73	133	1.883
676	15	6.89	34.34	2.72	700	6.60	34.36	26.99	108	1.965
772	15	5.71	34.42	2.19	800	(5.37)	(34.43)	(27.20)	(88)	(2.073)
569	KEITEN MARU; August 23, 1955; 1608–1700 GCT; 28°39'N, 128°02'E; 1805 01 286 1 x x 1530 Pl, La.									
0	0	28.8	32.70	4.68	0	28.8	32.70	20.45	732	0.000
10	5	29.13	33.66	4.58	10	29.13	33.66	21.03	676	0.070
25	5	28.71	34.31	4.53	25	28.71	34.31	21.66	616	0.168
50	5	28.32	34.34	4.60	50	28.32	34.34	21.81	602	0.320
75	5	26.86	34.52	4.84	75	26.86	34.52	22.42	543	0.464
100	8	25.75	34.65	4.82	100	25.75	34.65	22.87	500	0.595
149	8	22.72	34.74	4.65	150	22.68	34.74	23.85	407	0.825
199	6	20.50	34.85	4.35	200	20.46	34.85	24.55	340	1.015
295	10	16.63	34.65	4.40	300	16.49	34.65	25.39	260	1.323
394	10	13.89	34.54	3.97	400	13.81	34.52	25.88	213	1.570
491	11	12.57	34.43	3.73	500	12.27	34.42	26.11	192	1.784
589	11	9.27	34.29	3.13	600	9.04	34.29	26.58	147	1.965
682	13	7.25	34.25	2.59	700	7.02	34.25	26.85	121	2.110
780	13	5.38	34.22	2.14	800	(5.00)	(34.22)	(27.07)	(100)	(2.231)
570	KEITEN MARU; August 23, 1955; 2041–2143 GCT; 28°50'N, 127°29'E; 1405 02 278 1 32 3 900 Pl.									
0	0	28.4	33.44	4.74	0	28.4	33.44	21.11	669	0.000
10	5	28.91	34.04	4.94	10	28.91	34.04	21.39	642	0.066
25	5	28.31	33.98	4.96	25	28.31	33.98	21.56	626	0.161
49	10	27.53	33.93	5.22	50	27.48	33.95	21.80	603	0.315
74	10	26.26	34.38	4.83	75	26.19	34.40	22.54	532	0.457
97	15	24.60	34.61	4.40	100	24.45	34.61	23.23	466	0.583
145	15	22.10	34.63	4.31	150	21.75	34.63	24.03	389	0.800
193	15	18.66	34.63	4.40	200	18.24	34.60	24.92	305	0.976
286	17	13.16	34.31	4.43	300	12.65	34.31	25.95	207	1.239
382	17	9.56	34.27	3.62	400	9.29	34.25	26.51	154	1.427
467	20	8.24	34.13	3.00	500	7.74	34.13	26.65	140	1.582
560	20	6.83	34.13	2.46	600	6.71	34.15	26.81	125	1.722
644	23	6.53	34.16	2.58	700	6.09	34.13	26.87	119	1.852
736	23	5.80	34.18	2.33	800	(5.29)	(34.07)	(26.93)	(114)	(1.978)

OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	Z	T	S	σ_t	δ_T	ΔD
m	✲°	°C	‰	ml/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

KEITEN MARU; August 24, 1955; 0019–0050 GCT; 29°01'N, 127°07'E; 1405 03 300 1 571
34 2 450 Pl.

0	0	28.9	34.13	4.58	0	28.9	34.13	21.46	635	0.000
10	0	28.54	33.95	4.77	10	28.54	33.95	21.46	635	0.064
25	0	27.93	34.22	5.10	25	27.93	34.22	21.86	597	0.156
50	0	25.70	34.67	4.80	50	25.70	34.67	22.90	497	0.293
74	7	23.73	34.70	4.55	75	23.69	34.70	23.53	437	0.411
99	9	22.62	34.56	4.30	100	22.54	34.56	23.75	416	0.518
150	4	18.54	34.99	4.03	150	18.54	34.99	25.14	284	0.696
200	4	13.35	34.92	3.52	200	13.35	34.92	26.28	175	0.813
296	9	10.71	34.45	3.27	300	(10.60)	(34.43)	(26.43)	(161)	(0.987)

KEITEN MARU; August 24, 1955; 0235–0258 GCT; 29°07'N, 126°49'E; 1412 03 295 2 572
31 3 124 Pl.

0	0	29.8	33.28	5.00	0	29.8	33.28	20.54	723	0.000
10	0	29.02	33.10	4.74	10	29.02	33.10	20.60	718	0.072
25	0	28.78	33.15	4.79	25	28.78	33.15	20.75	703	0.179
50	0	26.16	33.48	4.61	50	26.16	33.48	21.86	597	0.335
75	5	21.05	34.33	4.34	75	21.05	34.33	23.99	393	0.460
100	5	18.78	34.25	4.18	100	18.78	34.25	24.51	344	0.552

KEITEN MARU; August 24, 1955; 0545–0601 GCT; 29°10'N, 126°23'E; 1204 03 291 1 573
26 2 105 Pl.

0	0	28.4	32.90	4.72	0	28.4	32.90	20.70	708	0.000
9	19	28.86	33.01	4.81	10	28.85	33.06	20.68	710	0.071
24	19	28.51	33.55	4.85	25	28.39	33.60	21.25	655	0.173
47	19	25.77	34.00	4.87	50	25.27	34.04	22.55	531	0.322
68	25	22.26	34.22	4.21	75	21.16	34.36	23.99	393	0.439
91	25	18.64	34.72	3.50	100	(17.23)	(34.92)	(25.42)	(257)	(0.521)

KEITEN MARU; August 24, 1955; 0818–0835 GCT; 29°13'N, 126°00'E; 1407 03 295 1 574
25 3 105 Pl.

0	0	28.7	33.59	4.86	0	28.7	33.59	21.10	670	0.000
10	5	28.86	33.40	4.73	10	28.86	33.40	20.94	685	0.068
24	18	27.79	33.93	4.90	25	27.68	33.95	21.73	609	0.165
48	18	25.09	34.31	4.73	50	24.85	34.33	22.91	496	0.304
70	21	22.27	34.56	4.46	75	21.81	34.54	23.95	397	0.416
93	21	20.14	34.47	4.03	100	(19.50)	(34.45)	(24.49)	(346)	(0.510)

KEITEN MARU; August 24, 1955; 1210–1235 GCT; 29°29'N, 126°30'E; 1414 03 287 1 575
x x 105 Pl, La.

0	0	28.6	32.59	5.01	0	28.6	32.59	20.41	736	0.000
10	2	28.99	32.47	4.97	10	28.99	32.47	20.19	757	0.075
25	2	28.85	33.15	–	25	28.85	33.15	20.75	703	0.184
47	20	24.04	33.73	5.03	50	23.20	33.86	23.04	484	0.333
66	28	18.65	34.58	4.05	75	18.63	34.69	24.90	307	0.433
88	28	18.59	34.85	3.65	100	(18.56)	(34.98)	(25.13)	(285)	(0.508)

OBSERVED					INTERPOLATED			COMPUTED		
Z m	W ∢°	T °C	S ‰	O_2 ml/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
576	KEITEN MARU; August 24, 1955; 1545-1605 GCT; 29°44'N, 127°00'E; 1409 43 274 1 x x 110 Pl, La.									
0	0	28.3	33.24	4.61	0	28.3	33.24	21.00	679	0.000
10	7	28.91	33.73	4.65	10	28.91	33.73	21.16	664	0.067
25	7	28.10	33.98	4.81	25	28.10	33.98	21.62	620	0.164
50	6	25.18	34.40	4.90	50	25.18	34.40	22.84	503	0.305
75	6	19.41	34.69	3.82	75	19.41	34.69	24.68	327	0.409
100	7	18.88	34.96	3.71	100	18.88	34.96	25.03	294	0.487
577	KEITEN MARU; August 24, 1955; 1928-1940 GCT; 29°59'N, 127°31'E; 1409 01 277 1 x x 147 Pl, La.									
0	0	28.2	32.97	4.68	0	28.2	32.97	20.82	697	0.000
10	0	28.63	33.17	4.85	10	28.63	33.17	20.83	696	0.070
25	2	28.08	33.84	4.62	25	28.08	33.84	21.52	629	0.169
50	3	28.25	34.38	5.03	50	28.25	34.38	21.87	596	0.323
75	3	21.66	34.79	4.39	75	21.66	34.79	24.18	375	0.445
100	5	18.76	35.05	4.34	100	18.76	35.05	24.64	331	0.534
578	KEITEN MARU; August 24, 1955; 2240-2310 GCT; 30°15'N, 128°00'E; 0909 03 278 1 28 3 327 Pl.									
0	0	28.7	33.68	5.96	0	28.7	33.68	21.20	660	0.000
10	2	28.75	33.21	4.80	10	28.75	33.21	20.81	697	0.068
25	2	28.69	34.18	4.89	25	28.69	34.18	21.58	624	0.167
50	3	25.72	34.74	-	50	25.72	34.74	22.95	493	0.307
75	3	22.22	35.01	5.14	75	22.22	35.01	24.19	374	0.416
100	5	20.78	35.08	-	100	20.78	35.08	24.64	331	0.505
149	5	15.95	34.78	4.05	150	15.89	34.78	25.63	237	0.650
196	10	12.78	34.61	3.69	200	12.70	34.61	26.18	185	0.758
295	10	10.46	34.52	3.35	300	(10.36)	(34.52)	(26.54)	(151)	(0.932)

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OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ✲°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
YUSHIO MARU; August 11, 1955; 1320-1420 GCT; 41°30'N, 142°00'E; 1103 01 220 11x2 1131 1 xx x 1080-3 xx 2 x x.											1001
0		22.0	34.05	5.44	0.10	0	22.0	34.05	23.53	437	0.000
10	0	21.81	34.04	5.57	0.11	10	21.80	34.04	23.57	433	0.044
25	0	20.81	34.07	5.45	0.10	25	20.80	34.07	23.87	405	0.107
50	0	19.30	34.09	5.89	0.17	50	19.30	34.09	24.26	367	0.203
75	8	19.14	34.11	5.47	0.56	75	19.15	34.11	24.32	362	0.295
100	8	16.70	34.11	5.90	0.09	100	16.70	34.11	24.92	305	0.379
159	20	13.40	34.07	5.79	0.05	150	13.90	34.07	25.51	249	0.520
189	20	11.36	34.04	6.01	0.13	200	11.25	33.96	25.95	207	0.636
265	20	3.53	33.51	6.24	1.00	300	2.75	33.51	26.74	132	0.809
346	20	1.75	33.51	5.58	1.44	400	2.05	33.62	26.89	117	0.934
419	30	2.13	33.66	4.05	1.82	500	2.50	33.86	27.03	104	1.046
619	30	2.96	34.05	1.75	1.98	600	2.90	34.02	27.13	95	1.149
728	30	3.01	34.18	1.17	2.21	700	3.00	34.15	27.23	85	1.243
YUSHIO MARU; August 11, 1955; 1945-2015 GCT; 41°36'N, 143°00'E; 0920 02 245 09x3 0932 1 13-4 4 550-3 x x x.											1002
0		21.0	33.51	5.43	0.10	0	21.0	33.51	23.38	451	0.000
12	20	17.68	34.22	6.00	0.13	10	18.25	34.11	24.54	341	0.040
26	20	14.42	34.29	5.74	0.20	25	14.65	34.29	25.52	248	0.084
50	20	12.59	34.15	6.06	0.31	50	12.60	34.15	25.83	218	0.142
74	20	11.03	33.95	6.10	0.26	75	11.00	33.95	25.98	204	0.196
101	33	10.58	33.95	6.11	0.38	100	10.60	33.95	26.04	198	0.246
142	33	7.14	33.80	6.05	0.72	150	5.70	33.72	26.60	145	0.333
165	33	3.06	33.39	4.92	1.33	200	2.60	33.43	26.69	136	0.404
245	33	2.03	33.44	7.05	1.63	300	1.85	33.53	26.83	123	0.535
339	33	1.74	33.59	5.14	1.72						
YUSHIO MARU; August 12, 1955; 0405-0510 GCT; 41°30'N, 144°00'E; 0520 02 197 05x5 0954 1 17-00 3 2000-1 x x x x.											1003
0		20.7	33.03	5.54		0	20.7	33.03	23.10	478	0.000
10	9	20.60	33.04	5.54		10	20.60	33.04	23.14	474	0.048
25	9	5.41	33.08	8.32		25	5.40	33.08	26.12	191	0.097
49	9	2.94	33.22	-		50	2.90	33.22	26.50	154	0.141
75	9	1.65	33.26	7.15		75	1.65	33.26	26.63	142	0.178
100	9	1.51	33.33	7.13		100	1.50	33.33	26.69	136	0.213
154	15	1.11	33.39	6.63		150	1.15	33.39	26.76	130	0.279
203	15	1.91	33.57	4.81		200	1.85	33.55	26.84	122	0.343
293	15	2.55	33.77	3.18		300	2.55	33.78	26.97	110	0.460
389	15	2.85	33.95	2.43		400	2.85	33.96	27.10	98	0.566
612	30	3.04	34.13	1.18		500	2.95	34.05	27.16	92	0.664
808	30	2.95	34.31	0.98		600	3.05	34.13	27.21	87	0.757
1000	30	2.70	34.40	0.93		700	3.00	34.22	27.28	80	0.845
1188	30	2.45	34.45	0.97		800	2.95	34.31	27.36	73	0.926
						1000	2.70	34.40	27.45	64	1.074
						1200	(2.45)	(34.45)	(27.52)	(58)	(1.208)

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1004 YUSHIO MARU; August 12, 1955; 1200-1415 GCT; 41°28'N, 145°02'E; 05-22 01 196 05x5 0944 1 x x 5400-1 x x x x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		22.1	33.26	-	0.17	0	22.1	33.26	22.90	497	0.000
12	16	21.61	33.21	5.69	0.15	10	21.70	33.21	22.96	494	0.050
26	16	7.45	33.21	8.30	1.03	25	9.35	33.21	25.68	232	0.104
50	16	2.89	33.28	7.28	1.24	50	2.90	33.28	26.54	151	0.152
78	19	2.64	33.39	7.12	1.44	75	2.65	33.39	26.65	140	0.189
97	19	2.23	33.42	6.84	1.47	100	2.20	33.42	26.71	135	0.223
169	25	1.39	33.48	5.74	1.70	150	1.60	33.46	26.79	126	0.289
202	25	2.00	33.78u	4.85	1.76	200	1.95	33.53	26.82	124	0.352
300	25	2.20	33.75	3.57	2.08	300	2.20	33.75	26.98	109	0.470
396	25	2.40	33.86	2.64	2.00	400	2.40	33.86	27.04	103	0.578
624	33	3.12	34.24	1.12		500	2.70	34.04	27.16	92	0.677
810	33	3.04	34.34	1.27		600	3.05	34.20	27.26	82	0.767
1005	33	2.75	34.43	0.97		700	3.05	34.27	27.33	76	0.850
1205	33	2.45	34.47	1.24		800	3.05	34.34	27.38	71	0.929
1562	50	2.17	34.52	2.29		1000	2.75	34.48	27.48	62	1.073
2064	50	1.91	34.61	2.51		1200	2.50	34.47	27.53	57	1.205
						1500	2.25	34.52	27.60	50	1.388
						2000	1.95	34.61	27.69	42	1.660

1005 YUSHIO MARU; August 12, 1955; 2210-2310 GCT; 41°27'N, 145°50'E; 0223 02 202 02x6 0528 1 15-00 3 6500-1 x x x x.

0		22.9	33.31	5.29		0	22.9	33.31	22.70	516	0.000
10	5	22.86	33.31	-		10	22.85	33.31	22.72	514	0.052
25	5	13.02	34.05	6.50		25	13.00	34.05	25.68	232	0.107
50	5	9.70	34.05	5.10		50	9.70	34.05	26.29	174	0.158
76	12	8.41	34.07	4.45		75	8.45	34.07	26.51	154	0.200
101	12	7.45	33.98	5.56		100	7.50	33.98	26.57	148	0.238
152	8	4.34	33.73	5.51		150	4.45	33.75	26.76	130	0.308
198	8	4.39	33.86	4.14		200	4.30	33.86	26.86	120	0.371
296	8	3.87	33.93	2.90		300	3.85	33.93	26.96	111	0.489
400	8	3.97	34.11	1.88		400	3.95	34.11	27.10	98	0.597
580	18	3.53	34.25	1.30		500	3.70	34.20	27.20	88	0.693
783	18	3.12	34.36	1.57		600	3.50	34.27	27.28	80	0.781
972	18	2.79	34.42	1.06		700	3.30	34.33	27.34	75	0.863
1154	18	2.57	34.47	0.98		800	3.10	34.36	27.39	70	0.941
						1000	2.75	34.42	27.46	63	1.085
						1200	(2.50)	(34.49)	(27.53)	(57)	(1.218)

1006 YUSHIO MARU; August 13, 1955; 0720-0820 GCT; 41°14'N, 146°50'E; 3629 02 201 36x7 0539 1 17-05 3 x x x x x.

0		22.2	33.44	5.14		0	22.2	33.44	23.00	488	0.000
11	10	22.09	33.40	5.40		10	22.10	33.40	23.01	487	0.049
26	10	12.59	33.55	8.10		25	13.20	33.55	25.24	274	0.106
50	10	8.05	33.78	5.78		50	8.05	33.78	26.32	172	0.162
75	16	5.52	33.68	6.25		75	5.50	33.68	26.58	147	0.202
99	16	5.18	33.75	6.24		100	5.15	33.75	26.68	137	0.238
158	22	4.59	33.75	6.52		150	4.65	33.75	26.73	133	0.306
210	22	3.53	33.73	4.82		200	3.75	33.73	26.81	125	0.372
298	22	3.11	33.82	3.06		300	3.15	33.82	26.96	111	0.492
395	22	3.91	34.09	1.55		400	3.90	34.09	27.09	98	0.599
631	30	2.95	34.24	1.20		500	3.50	34.16	27.19	89	0.695
828	30	2.80	34.36	1.01		600	3.10	34.22	27.28	80	0.783
1020	30	2.62	34.42	0.90		700	2.95	34.29	27.34	75	0.865
1219	30	2.45	34.49	1.20		800	2.80	34.34	27.40	69	0.942
						1000	2.65	34.42	27.48	62	1.083
						1200	2.45	34.49	27.54	56	1.212

OBSERVED						INTERPOLATED			COMPUTED			
Z m	W * °	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	

YUSHIO MARU; August 13, 1955; 1805-1915 GCT; 41°42'N, 145°56'E; 3423 02 193 34x6 0537 1 x x 6900-1 x x x x. 1007

0		20.9	33.21	5.59		0	20.9	33.21	23.18	471	0.000
11	8	21.17	33.15	5.29		10	21.15	33.15	23.07	481	0.048
25	8	15.97	33.87	6.83		25	15.95	33.87	24.91	306	0.107
50	8	9.81	33.93	6.27		50	9.80	33.93	26.17	186	0.168
75	8	3.96	33.33	7.06		75	3.95	33.33	26.49	155	0.211
100	8	2.86	33.42	7.06		100	2.85	33.42	26.66	139	0.248
160	35	4.27	33.71	5.41		150	4.05	33.66	26.73	133	0.317
207	35	4.77	33.89	4.03		200	4.70	33.87	26.83	123	0.381
296	35	3.56	33.89	3.16		300	3.55	33.89	26.97	110	0.500
397	35	3.77	34.07	2.10		400	3.75	34.07	27.09	98	0.607
605	30	3.32	34.24	1.60		500	3.50	34.16	27.20	88	0.703
804	30	2.92	34.31	1.04		600	3.30	34.24	27.26	82	0.792
1004	30	2.83	34.42	2.24		700	3.10	34.27	27.32	77	0.876
1200	30	2.55	34.49	1.66		800	2.95	34.31	27.36	73	0.956
						1000	2.85	34.42	27.45	64	1.104
						1200	2.55	34.49	27.53	57	1.238

YUSHIO MARU; August 14, 1955; 0130-0230 GCT; 42°03'N, 145°13'E; 3422 80 192 34x6 3646 1 18-07 3 3500-1 x x x x. 1008

0		21.0	33.12	5.31	0.15	0	21.0	33.12	23.09	479	0.000
11	10	21.13	33.10	5.56	0.26	10	21.10	33.10	23.03	485	0.048
26	10	10.94	33.12	9.05	0.45	25	11.60	33.12	25.21	277	0.106
50	10	3.87	33.24	7.52	0.73	50	3.85	33.24	26.43	161	0.161
77	10	2.21	33.31	7.22	0.90	75	2.35	33.31	26.62	143	0.199
101	10	2.85	33.46	6.83	1.02	100	2.80	33.46	26.70	135	0.233
150	10	2.84	33.51	6.18	1.73	150	2.85	33.51	26.74	132	0.301
188	15	2.97	33.68	4.67	0.58	200	2.95	33.69	26.87	119	0.364
285	15	3.05	33.87	3.11	0.82	300	3.00	33.89	27.02	105	0.478
390	15	2.75	33.95	2.37	0.24	400	2.75	33.95	27.09	98	0.581
618	25	3.08	34.02	1.63	0.47	500	2.90	33.98	27.10	98	0.682
814	25	2.88	34.29	1.03	0.80	600	3.05	34.02	27.12	96	0.782
1010	25	2.77	34.40	0.92	0.56	700	2.95	34.15	27.23	85	0.877
1200	25	2.39	34.47	1.08	0.86	800	2.90	34.27	27.33	76	0.963
						1000	2.75	34.40	27.44	65	1.115
						1200	2.40	34.47	27.53	57	1.249

YUSHIO MARU; August 14, 1955; 0802-0900 GCT; 42°32'N, 144°35'E; 3606 02 185 36x4 0944 1 xx x 1870-1 x 2 x x. 1009

0		14.7	33.21	7.10	0.33	0	14.7	33.21	24.67	328	0.000
10	4	12.50	33.30	7.19	0.22	10	12.50	33.30	25.18	280	0.030
25	4	8.35	33.39	6.67	0.29	25	8.35	33.39	25.98	204	0.067
50	4	6.94	33.44	6.54	0.44	50	6.95	33.44	26.22	181	0.115
75	7	4.58	33.39	6.44	0.60	75	4.60	33.39	26.47	157	0.158
100	7	1.02	33.26	6.55	0.64	100	1.00	33.26	26.67	138	0.195
151	10	1.27	33.33	6.35	1.40	150	1.25	33.33	26.71	135	0.263
201	10	1.02	33.40	5.69	1.42	200	1.05	33.40	26.78	128	0.329
294	10	1.32	33.55	4.88	1.16	300	1.35	33.55	26.88	118	0.453
394	10	1.70	33.62	4.17	1.35	400	1.70	33.62	26.91	116	0.570
610	22	2.54	33.95	-	1.13	500	2.10	33.78	27.01	106	0.683
807	22	2.89	34.18	1.08	1.29	600	2.50	33.93	27.10	98	0.787
1000	22	2.77	34.31	1.00	1.51	700	2.70	34.05	27.18	90	0.885
1195	22	2.54	34.43	1.00	1.70	800	2.90	34.18	27.26	82	0.975
						1000	2.75	34.31	27.36	72	1.140
						1200	(2.55)	(34.43)	(27.50)	(60)	(1.285)

1010 YUSHIO MARU; August 17, 1955; 0630-0700 GCT; 42°30'N, 144°00'E; 2009 61 161 20x3 1841 1 08-40 6 420-3 x 2 x x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		17.7	32.90	6.39	0.29	0	17.7	32.90	23.76	415	0.000
10	0	15.71	33.19	6.94	0.30	10	15.70	33.19	24.43	351	0.038
25	0	9.87	33.39	6.83	0.50	25	9.85	33.39	25.74	227	0.082
50	0	8.05	33.62	6.30	0.80	50	8.05	33.62	26.20	183	0.133
75	6	6.29	33.51	6.37	0.92	75	6.30	33.51	26.36	168	0.177
100	6	4.04	33.33	6.70	1.13	100	4.05	33.33	26.48	156	0.218
149	6	1.08	33.30	6.21	1.70	150	1.10	33.30	26.69	136	0.291
199	6	1.16	33.44	5.53	1.98	200	1.15	33.44	26.80	126	0.357
298	6	1.64	33.60	4.54	2.26	300	1.65	33.60	26.90	117	0.480
397	6	1.96	33.71	3.63	1.96	400	2.00	33.71	26.96	111	0.595

1011 YUSHIO MARU; August 17, 1955; 1100-1155 GCT; 42°00'N, 144°02'E; 2216 61 197 22x4 1831 1 xx x xx x 2 x.

0		16.8	33.01	6.54	0.37	0	16.8	33.01	24.06	387	0.000
11	12	16.27	32.95	-	0.30	10	16.25	32.95	24.13	380	0.038
25	12	11.89	33.21	7.54	0.18	25	11.90	33.21	25.23	275	0.088
50	12	5.63	33.31	-	0.91	50	5.65	33.31	26.28	175	0.144
75	16	1.83	33.13	6.90	1.51	75	1.85	33.13	26.51	154	0.185
100	16	1.32	33.26	6.86	1.53	100	1.30	33.26	26.65	140	0.222
150	12	1.06	33.33	6.15	1.53	150	1.05	33.33	26.72	134	0.290
198	12	1.22	33.42	5.64	1.82	200	1.25	33.42	26.78	128	0.356
296	12	1.61	33.60	3.99	2.21	300	1.65	33.60	26.91	116	0.479
400	15	2.26	33.78	2.81	2.03	400	2.25	33.78	27.00	107	0.592
605	15	2.76	34.02	1.53	-	500	2.50	33.91	27.08	99	0.697
805	15	2.93	34.31	0.96	-	600	2.75	34.02	27.14	94	0.796
1001	15	2.75	-	0.85	2.34	700	2.85	34.16	27.25	83	0.888
						800	2.95	34.31	27.36	73	0.971
						1000	2.75				

1012 YUSHIO MARU; August 17, 1955; 2005-2115 GCT; 40°59'N, 144°03'E; 25 14 03 233 25x3 1831 1 19-03 3 4200-1 x x x x.

0		23.1	33.31	5.34	0.04	0	23.1	33.31	22.67	519	0.000
10	4	23.01	33.28	5.13	0.06	10	23.00	33.28	22.65	521	0.052
25	4	12.65	33.53	7.97	0.19	25	12.65	33.53	25.34	265	0.111
50	4	7.15	33.57	6.65	0.63	50	7.15	33.57	26.29	174	0.179
75	10	6.70	33.84	5.54	0.84	75	6.70	33.84	26.57	148	0.232
100	10	5.12	33.75	5.61	1.03	100	5.10	33.75	26.69	136	0.268
152	13	3.66	33.64	5.66	0.97	150	3.70	33.64	26.75	131	0.335
202	13	2.42	33.57	5.29	1.34	200	2.45	33.57	26.82	124	0.399
302	13	2.76	33.75	3.08	1.69	300	2.75	33.75	26.93	114	0.520
398	13	3.15	33.96	2.13	1.39	400	3.15	33.96	27.07	100	0.629
606	22	2.98	34.18	1.02	1.81	500	3.10	34.07	27.16	92	0.727
804	22	3.18	34.34	0.92	1.66	600	3.00	34.18	27.26	82	0.818
1000	22	2.82	34.40	1.36	1.81	700	3.10	34.27	27.30	79	0.903
1194	22	2.57	34.47	0.95	1.67	800	3.20	34.34	27.36	73	0.984
						1000	2.80	34.40	27.44	65	1.132
						1200	(2.55)	(34.47)	(27.52)	(58)	(1.267)

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

YUSHIO MARU; August 18, 1955; 0600-0730 GCT; 40°00'N, 144°05'E; 23 12 02 243 23x2 1822 1 22-05 2 xx x 2 x x. 1013

0		24.8	33.87	5.20	0.04
10	3	23.94	33.78	5.06	0.04
25	3	16.20	34.51	5.76	0.05
50	3	10.80	34.07	5.47	0.41
75	6	7.42	33.69	6.26	0.53
100	6	4.77	33.62	6.34	0.89
151	15	2.05	33.42	6.98	1.00
202	15	1.72	33.50	5.96	1.14
300	15	2.83	33.71	4.36	1.55
407	17	2.99	33.91	2.81	1.47
609	17	3.35	34.22	1.28	1.60
807	17	2.83	34.27	0.96	1.81
990	17	2.81	34.42	0.99	1.63
1200	20	2.56	34.49	1.02	1.80
1471	20	2.27	34.56	1.24	1.65
1958	20	1.91	34.58	1.83	1.55

0	24.8	33.87	22.57	529	0.000
10	23.95	33.78	22.76	511	0.052
25	16.20	34.51	25.34	265	0.111
50	10.80	34.07	26.11	192	0.168
75	7.40	33.69	26.35	169	0.213
100	4.75	33.62	26.63	142	0.252
150	2.10	33.42	26.73	133	0.322
200	1.75	33.50	26.81	125	0.387
300	2.85	33.71	26.90	117	0.509
400	3.00	33.89	27.02	105	0.622
500	3.20	34.05	27.13	95	0.725
600	3.35	34.20	27.23	85	0.818
700	3.10	34.24	27.29	80	0.905
800	2.85	34.27	27.34	75	0.986
1000	2.80	34.42	27.46	63	1.133
1200	(2.55)	(34.49)	(27.53)	(57)	(1.265)
1500	2.25	34.56	27.62	48	(1.444)
2000	1.90	34.58	27.67	44	(1.711)

YUSHIO MARU; August 18, 1955; 1450-1600 GCT; 39°10'N, 144°00'E; 20 16 01 243 20x3 1832 2 xx x xx x 2 x x. 1014

0		24.0	33.91	5.60	
11	16	23.83	33.86	5.38	
25	16	17.06	33.82	6.95	
49	16	16.46u	33.50	-	
75	15	9.87	34.04	4.94	
98	15	8.12	34.02	4.76	
158	23	7.49	34.24	2.84	
205	23	5.85	34.22	2.41	
304	23	4.11	34.15	1.96	
397	23	4.25	34.24	1.64	
600	35	3.44	34.33	1.23	
795	35	3.00	34.40	1.16	
990	35	2.65	34.45	1.34	
1184	35	2.47	34.51	1.46	

0	24.0	33.91	22.84	503	0.000
10	23.85	33.86	22.84	503	0.050
25	17.05	33.82	24.61	334	0.113
50	13.95	33.51	25.07	290	0.192
75	9.85	34.04	26.24	179	0.251
100	8.10	34.02	26.51	154	0.293
150	7.60	34.20	26.72	134	0.366
200	6.00	34.22	26.95	112	0.429
300	4.10	34.15	27.11	97	0.537
400	4.25	34.24	27.17	91	0.634
500	3.85	34.29	27.24	84	0.725
600	3.45	34.33	27.32	77	0.809
700	3.20	34.36	27.37	73	0.889
800	3.00	34.40	27.43	66	0.961
1000	2.65	34.45	27.50	60	1.097
1200	2.45	34.51	27.56	54	1.222

YUSHIO MARU; August 18, 1955; 2300-2355GCT; 38°54'N, 144°58'E; 23 07 03 251 23x3 2333 1 25-07 2 xx x x x x. 1015

0		24.2	33.60	5.71	0.18
10	5	23.91	33.59	5.34	0.10
25	5	24.21	33.59	5.09	0.11
50	5	14.10	33.89	6.49	0.20
75	10	7.52	33.78	5.76	0.76
99	10	4.37	33.55	6.63	0.78
152	12	2.50	33.50	7.00	1.09
203	12	1.99	33.53	5.56	1.40
303	12	2.48	33.75	3.01	1.50
400	12	4.86	34.22	1.94	1.52
600	4	2.93	34.22	1.13	1.57
800	4	3.10	34.40	1.08	1.63
992	4	2.78	34.45	1.16	1.34
1190	4	2.49	34.51	1.09	-

0	24.2	33.60	22.54	532	0.000
10	23.90	33.59	22.62	524	0.053
25	24.20	33.59	22.53	533	0.132
50	14.10	33.89	25.33	266	0.233
75	7.50	33.78	26.41	163	0.287
100	4.35	33.55	26.61	144	0.325
150	2.55	33.50	26.74	132	0.395
200	2.00	33.53	26.82	124	0.459
300	2.45	33.75	26.95	112	0.579
400	4.85	34.22	27.09	98	0.687
500	3.90	34.22	27.20	88	0.785
600	2.95	34.22	27.29	80	0.874
700	3.00	34.31	27.35	74	0.955
800	3.10	34.40	27.42	67	1.031
1000	2.75	34.45	27.49	61	1.169
1200	(2.45)	(34.51)	(27.56)	(54)	(1.295)

HMO

NORPAC

1016

YUSHIO MARU; August 19, 1955; 0800-0900 GCT; 38°23'N, 146°00'E; 20 13 02 250 20x3 2023 1 24-15 2 xx x 2 x x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		23.9	33.86	5.16		0	23.9	33.86	22.84	503	0.000
10	6	23.55	33.86	5.11		10	23.55	33.86	22.93	494	0.050
25	6	17.34	34.22	-		25	17.35	34.22	24.84	312	0.111
50	6	11.88	34.16	5.13		50	11.90	34.16	25.98	204	0.175
75	8	9.83	34.07	5.13		75	9.85	34.07	26.28	175	0.223
100	8	9.32	34.16	5.24		100	9.30	34.16	26.43	161	0.266
147	22	7.30	33.96	5.13		150	7.20	33.96	26.60	145	0.343
195	22	5.55	33.87	4.96		200	5.45	33.87	26.75	131	0.414
294	22	3.74	33.87	3.79		300	3.75	33.87	26.93	114	0.539
391	22	3.83	34.00	2.46		400	3.80	34.02	27.04	103	0.650
607	20	3.63	34.24	1.22		500	3.70	34.13	27.14	94	0.752
807	20	3.20	34.34	1.02		600	3.65	34.24	27.23	85	0.846
1003	20	2.81	34.42	1.01		700	3.45	34.29	27.31	78	0.933
1200	20	2.45	34.43	0.99		800	3.20	34.34	27.37	72	1.013
						1000	2.80	34.42	27.46	63	1.159
						1200	2.45	34.43	27.50	60	1.294

1017

YUSHIO MARU; August 19, 1955; 1455-1600 GCT; 38°19'N, 145°15'E; 2314 01 249 23x3 2032 1 xx x xx x x x x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		24.0	33.33	5.35	0.02	0	24.0	33.33	22.40	545	0.000
10	7	19.93	32.99	6.63	0.05	10	19.95	32.99	23.27	462	0.050
25	7	13.38	33.86	7.39	0.10	25	13.40	33.86	25.45	254	0.104
50	7	13.05	34.16	5.10	0.15	50	13.05	34.16	25.76	225	0.164
75	6	9.98	34.04	5.33	0.28	75	10.00	34.04	26.23	180	0.215
99	6	4.80	33.51	-	0.60	100	4.75	33.51	26.54	151	0.257
150	0	2.54	33.44	6.44	0.84	150	2.55	33.44	26.71	135	0.329
200	0	1.96	33.44	6.12	1.01	200	1.95	33.44	26.74	132	0.396
300	0	2.26	33.71	3.77	1.21	300	2.25	33.71	26.94	113	0.520
400	0	2.89	33.93	2.41	1.22	400	2.90	33.93	27.06	101	0.628
596	0	3.04	34.13	1.27	1.34	500	2.95	34.04	27.13	95	0.729
796	0	2.86	34.29	0.89	1.48	600	3.05	34.13	27.21	87	0.823
996	0	2.78	34.40	0.89	1.47	700	2.95	34.22	27.29	80	0.911
1178	0	2.59	34.47	1.11	-	800	2.85	34.29	27.35	74	0.993
						1000	2.80	34.40	27.44	65	1.142
						1200	(2.55)	(34.47)	(27.52)	(58)	(1.277)

1018

YUSHIO MARU; August 20, 1955; 0455-0635 GCT; 38°12'N, 144°17'E; 20 22 02 275 20 x 4 2023 1 24-15 2 7000-1 x 2 x x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		26.9	34.24	4.76	0.02	0	26.9	34.24	22.21	563	0.000
10	19	26.84	34.22	4.80	0.01	10	26.85	34.22	22.20	564	0.056
25	19	26.08	34.31	4.65	0.01	25	26.10	34.31	22.50	535	0.139
48	19	23.65	34.74	4.71	0.03	50	23.50	34.74	23.61	429	0.260
74	15	21.59	34.81	4.38	0.03	75	21.50	34.81	24.23	370	0.360
98	15	19.65	34.79	4.26	0.05	100	19.55	34.79	24.74	322	0.448
150	32	17.60	34.72	4.25	0.08	150	17.60	34.72	25.18	280	0.600
168	32	15.97	34.61	4.29	0.18	200	15.35	34.54	25.56	244	0.733
232	32	12.63	34.45	3.70	0.46	300	10.05	34.34	26.45	159	0.941
323	32	9.23	34.31	3.42	0.58	400	7.80	34.29	26.77	129	1.092
534	64	5.34	34.25	2.26	1.05	500	5.70	34.16	26.95	112	1.219
615	64	3.18	33.98	1.95	1.34	600	3.60	34.04	27.09	98	1.330

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

YUSHIO MARU; August 20, 1955; 2050-2200 GCT; 38°14'N, 143°29'E; 27 12 02 241 27x3 2234 1 13-05 3 1019
3000-1 x 2 x x.

0		24.2	32.97	5.13	
10	0	19.95	33.71	6.02	
25	0	16.18	34.15	5.72	
50	0	11.40	34.05	5.67	
75	0	8.97	34.04	4.64	
100	0	3.03	33.39	6.71	
152	8	1.86	33.35	-	
206	8	1.91	33.46	5.45	
305	8	2.40	33.77	4.30	
404	8	2.77	33.93	2.15	
600	3	2.92	34.15	1.12	
800	3	2.85	34.31	2.09	
1003	3	2.62	34.40	0.97	
1208	3	2.41	34.47	1.35	

0	24.2	32.97	22.06	578	0.000
10	19.95	33.71	23.81	410	0.049
25	16.20	34.15	25.06	291	0.102
50	11.40	34.05	26.00	202	0.164
75	8.95	34.04	26.40	164	0.210
100	3.05	33.39	26.62	143	0.249
150	1.90	33.35	26.67	138	0.319
200	1.95	33.44	26.75	131	0.387
300	2.40	33.75	26.96	111	0.510
400	2.75	33.93	27.07	100	0.617
500	2.85	34.04	27.15	93	0.716
600	2.90	34.15	27.23	85	0.809
700	2.90	34.24	27.30	79	0.895
800	2.85	34.31	27.37	72	0.976
1000	2.60	34.40	27.46	63	1.121
1200	2.40	34.47	27.53	57	1.252

YUSHIO MARU; August 21, 1955; 0250-0400 GCT; 38°21'N, 142°41'E; 27 07 03 23 7 27 x 2 2234 2 13-05 3 1020
1500-1 x x x x.

0		24.1	32.97	5.50	0.03	
11	18	21.84	32.95	5.93	0.04	
25	18	6.95	33.17	8.37	0.36	
50	18	4.07	33.50	6.27	0.84	
72	23	2.38	33.39	7.11	0.89	
95	23	1.95	33.42	6.88	1.01	
164	40	2.16	33.53	5.00	1.13	
211	40	2.11	33.57	4.46	1.27	
302	40	2.13	33.73	3.27	1.40	
397	40	2.88	33.95	2.00	1.50	
620	37	3.06	34.22	2.04	1.92	
813	37	2.80	34.36	0.88	1.90	
1000	37	2.66	34.40	0.91	1.90	
1196	37	2.45	-	0.93	-	

0	24.1	32.97	22.10	574	0.000
10	22.00	32.95	22.68	518	0.055
25	6.95	33.17	26.01	201	0.109
50	4.05	33.50	26.60	145	0.152
75	2.30	33.39	26.68	137	0.187
100	1.95	33.42	26.73	133	0.221
150	2.10	33.51	26.80	126	0.286
200	2.10	33.57	26.83	123	0.349
300	2.15	33.73	26.97	110	0.467
400	2.90	33.95	27.08	99	0.573
500	3.00	34.07	27.17	91	0.670
600	3.05	34.20	27.26	82	0.760
700	2.95	34.27	27.33	76	0.844
800	2.80	34.34	27.40	69	0.921
1000	2.65	34.40	27.46	63	1.063
1200	(2.45)				

YUSHIO MARU; August 21, 1955; 0805-0840 GCT; 38°14'N, 142°00'E; 29 06 21 233 29x2 2034 1 14-20 3 1021
400-3 x 2 x x.

0		22.6	33.89	6.42	0.02	
10	20	21.94	33.91	5.52	0.10	
25	20	19.83	34.00	5.66	0.03	
49	20	17.97	34.07	5.69	0.55	
75	25	11.37	34.00	5.86	0.49	
98	25	9.19	33.78	6.13	0.61	
143	25	4.62	33.40	6.45	0.93	
180	25	1.13	33.24	6.55	1.38	
278	25	1.65	33.42	5.59	1.31	

0	22.6	33.89	23.23	466	0.000
10	21.95	33.91	23.43	447	0.046
25	19.85	34.00	24.07	386	0.108
50	17.70	34.07	24.65	330	0.198
75	11.35	34.00	25.95	207	0.266
100	9.00	33.77	26.18	185	0.315
150	3.95	33.37	26.52	153	0.400
200	1.25	33.28	26.67	138	0.473
300	(1.75)	(33.46)	(26.78)	(128)	(0.607)

HMO

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OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
1022	YUSHIO MARU; August 31, 1955; 0630-0720 GCT; 39°30'N, 142°27'E; 20 16 61 218 20x3 1833 1 13-10 4 xx x 2 x x.										
0		19.9	33.96	5.92		0	19.9	33.96	24.02	390	0.000
11	12	19.58	33.96	5.98		10	19.60	33.96	24.10	383	0.039
25	12	11.68	33.62	7.65		25	11.70	33.62	25.60	240	0.086
50	12	10.94	34.02	6.01		50	10.95	34.02	26.06	196	0.140
75	10	7.29	33.55	6.59		75	7.30	33.55	26.25	178	0.187
100	10	5.63	33.57	6.25		100	5.65	33.57	26.49	155	0.229
149	10	2.68	33.31	6.46		150	2.65	33.32	26.59	146	0.305
198	10	1.75	33.39	6.65		200	1.75	33.39	26.72	134	0.375
339	40	2.60	33.68	4.18		300	2.35	33.60	26.84	122	0.504
434	40	2.78	33.84	2.94		400	2.75	33.78	26.96	111	0.622
629	40	2.99	34.05	1.44		500	2.85	33.89	27.04	103	0.731
823	40	2.97	34.25	1.09		600	2.95	34.02	27.13	95	0.834
						700	3.00	34.13	27.21	87	0.929
						800	3.00	34.24	27.30	79	1.017
1023	YUSHIO MARU; August 31, 1955; 1035-1200 GCT; 39°31'N, 142°59'E; 18 17 61 245 18x3 1833 1 xx x xx x x x x.										
0		24.4	33.60	5.09	1.13	0	24.4	33.60	22.50	536	0.000
11	10	24.33	33.60	5.21	0.48	10	24.35	33.60	22.52	534	0.054
26	10	18.77	34.18	5.98	0.16	25	19.15	34.15	24.34	360	0.121
50	10	15.12	34.31	5.04	0.75	50	15.10	34.31	25.43	256	0.198
75	10	13.74	34.40	4.75	0.75	75	13.75	34.40	25.80	221	0.258
100	10	9.85	34.00	5.36	0.75	100	9.85	34.00	26.22	181	0.309
152	30	5.56	33.77	5.33	1.06	150	5.75	33.75	26.61	144	0.391
201	30	4.22	33.71	5.40	1.25	200	4.25	33.71	26.75	131	0.461
290	30	2.85	33.69	4.32	1.49	300	2.90	33.71	26.90	117	0.587
382	30	3.64	33.93	2.79	1.57	400	3.65	33.95	27.01	106	0.700
597	30	3.84	34.22	1.68	1.65	500	3.70	34.09	27.11	97	0.805
795	30	3.08	34.29	1.06	1.97	600	3.80	34.22	27.20	88	0.902
979	30	3.02	34.38	1.56	1.59	700	3.45	34.25	27.27	81	0.992
1177	30	2.45	34.38	1.30	1.32	800	3.10	34.29	27.33	76	1.075
						1000	2.95	34.38	27.42	67	1.229
						1200	(2.40)	(34.38)	(27.47)	(62)	(1.370)
1024	YUSHIO MARU; August 31, 1955; 1840-1945 GCT; 39°35'N, 144°00'E; 18 16 02 243 18x3 0345 1 xx x xx x 2 x x.										
0		24.0	33.44	5.71	0.15	0	24.0	33.44	22.48	537	0.000
11	10	23.57	33.33	5.54	0.24	10	23.60	33.35	22.53	533	0.054
26	10	14.10	33.24	7.82	0.20	25	14.75	33.24	24.69	327	0.118
50	10	7.73	33.42	6.44	0.32	50	7.75	33.42	26.10	192	0.183
76	18	5.34	33.39	6.54	1.20	75	5.45	33.39	26.37	167	0.229
100	18	2.82	33.31	6.85	0.94	100	2.80	33.31	26.58	147	0.268
154	15	1.76	33.30	6.58	1.10	150	1.85	33.30	26.64	141	0.341
202	15	2.81	33.40	6.32	1.10	200	2.75	33.40	26.65	140	0.411
300	15	1.82	33.53	4.64	1.28	300	1.80	33.53	26.83	123	0.544
398	15	4.26	34.02	2.75	1.38	400	4.25	34.02	26.99	108	0.661
627	28	3.07	34.05	1.46	1.58	500	3.70	34.04	27.07	100	0.769
818	28	2.83	34.24	1.32	1.64	600	3.15	34.05	27.13	95	0.870
1015	28	2.93	34.42	1.30	1.47	700	3.00	34.13	27.21	87	0.966
1210	28	2.56	34.47	1.03	1.33	800	2.85	34.22	27.30	79	1.054
						1000	2.95	34.40	27.43	66	1.210
						1200	2.60	34.47	27.52	58	1.347

OBSERVED					
Z	W	T	S	O_2	PO_4-P
m	ϡ°	°C	‰	ml/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

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YUSHIO MARU; September 1, 1955; 0225-0330 GCT; 39°40'N, 144°58'E; 27 14 02 242 27x3 0345 2 20-15 2 xx x x x x. 1025

Z	W	T	S	O_2	PO_4-P
0		25.2	33.86	4.66	
10	12	25.06	33.84	4.93	
25	12	21.66	34.52	4.97	
50	12	18.84	34.63	4.36	
76	16	15.64	34.15	5.44	
100	16	13.74	34.27	4.86	
152	45	8.66	34.20	3.91	
202	45	7.04	34.07	4.18	
300	45	5.09	33.98	3.59	
400	45	5.47	34.20	2.42	
624	53	3.06	34.16	1.20	
800	53	2.93	34.25	1.08	
985	53	2.75	34.36	0.98	
1176	53	2.56	34.43	1.11	

Z	T	S	σ_t	δ_T	ΔD
0	25.2	33.86	22.44	541	0.000
10	25.05	33.84	22.47	538	0.054
25	21.65	34.52	23.98	394	0.124
50	18.85	34.63	24.80	316	0.213
75	15.75	34.16	25.19	279	0.288
100	13.75	34.27	25.70	230	0.352
150	8.85	34.20	26.53	152	0.449
200	7.10	34.07	26.70	135	0.522
300	5.10	33.98	26.88	118	0.652
400	5.45	34.20	27.01	106	0.768
500	4.40	34.18	27.11	97	0.874
600	3.30	34.16	27.21	87	0.970
700	3.00	34.22	27.28	80	1.058
800	2.95	34.25	27.32	77	1.143
1000	2.75	34.36	27.42	67	1.298
1200	(2.55)	(34.43)	(27.49)	(61)	(1.439)

YUSHIO MARU; September 1, 1955; 1035-1150 GCT; 39°36'N, 146°00'E; 21 16 63 229 21x3 3643 1 xx x xx x x x x. 1026

Z	W	T	S	O_2	PO_4-P
0		25.0	32.88	4.97	0.09
11	10	25.00	33.78	5.05	0.05
25	10	18.89	34.33	3.71	0.10
50	10	15.91	34.51	5.45	0.09
75	12	13.98	34.43	4.58	0.45
100	12	12.30	34.34	4.61	0.41
154	40	10.56	34.25	5.35	0.44
193	40	9.58	34.24	4.72	0.60
270	40	6.07	33.89	5.35	0.84
342	40	4.60	33.84	4.32	1.04
571	42	3.85	34.09	1.83	1.43
742	42	3.50	34.29	1.35	1.57
940	42	3.08	34.34	1.10	1.50
1143	42	2.61	34.42	1.05	1.20

Z	T	S	σ_t	δ_T	ΔD
0	25.0	32.88	21.77	605	0.000
10	25.00	33.69	22.38	547	0.058
25	18.90	34.33	24.54	341	0.124
50	15.90	34.51	25.41	258	0.200
75	14.00	34.43	25.78	223	0.260
100	12.30	34.34	26.04	198	0.314
150	10.70	34.25	26.27	176	0.409
200	9.90	34.20	26.36	168	0.496
300	5.45	33.87	26.75	131	0.650
400	3.40	33.89	26.98	109	0.773
500	4.05	34.00	27.00	107	0.884
600	3.75	34.11	27.12	96	0.990
700	3.60	34.24	27.24	84	1.085
800	3.35	34.31	27.32	77	1.171
1000	2.95	34.36	27.40	69	1.329
1200	(2.50)	(34.43)	(27.50)	(60)	(1.471)

YUSHIO MARU; September 1, 1955; 1800-1955 GCT; 39°32'N, 146°59'E; 25 09 61 235 25x2 3643 1 xx x xx x 2 x x. 1027

Z	W	T	S	O_2	PO_4-P
0		24.7	34.02	5.04	0.05
10	7	24.63	33.98	5.28	0.04
25	7	20.11	34.40	5.72	0.04
50	7	14.66	34.34	5.80	0.10
75	7	12.40	-	4.83	0.38
100	7	10.91	34.24	4.89	0.45
151	11	9.70	34.22	4.55	0.53
200	11	7.14	33.95	5.19	0.57
298	11	4.68	33.78	5.12	0.94
397	11	4.25	33.95	3.41	1.07
600	14	3.93	34.18	1.54	1.17
788	14	3.41	34.29	1.06	1.17
985	14	2.97	34.40	1.12	1.16
1180	14	2.62	34.40	1.05	1.16
1556	30	2.24	34.52	1.27	1.33
2050	30	1.88	34.63	1.89	1.20

Z	T	S	σ_t	δ_T	ΔD
0	24.7	34.02	22.71	515	0.000
10	24.65	33.98	22.70	516	0.052
25	20.10	34.40	24.30	364	0.118
50	14.65	34.34	25.56	244	0.194
75	12.40	34.29	25.98	204	0.250
100	10.90	34.24	26.22	181	0.299
150	9.70	34.22	26.41	163	0.386
200	7.15	33.95	26.59	146	0.465
300	4.65	33.78	26.77	129	0.606
400	4.25	33.98	26.96	111	0.730
500	4.10	34.07	27.06	101	0.839
600	3.95	34.18	27.16	92	0.940
700	3.65	34.25	27.24	84	1.034
800	3.35	34.31	27.32	77	1.120
1000	2.95	34.40	27.43	66	1.275
1200	2.60	34.40	27.46	63	1.417
1500	2.30	34.51	27.58	52	1.611
2000	1.85	34.63	27.71	40	1.878

HMO

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OBSERVED						INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L	m	°C	‰	g/L	10^{-5} cm³/g	dyn. m

1028 YUSHIO MARU; September 2, 1955; 0745-0845 GCT; 40°28'N, 145°58'E; 0214 02 247 02x4 3645 1 25-05 2 xx x 2 x x.

0		24.3	33.73	4.16		0	24.3	33.73	22.61	525	0.000
10	5	24.32	33.73	5.04		10	24.30	33.73	22.61	525	0.053
25	5	18.96	34.13	6.09		25	18.95	34.13	24.38	356	0.119
50	5	12.40	34.11	5.84		50	12.40	34.11	25.84	217	0.191
75	7	10.86	34.22	-		75	10.85	34.22	26.21	182	0.241
100	7	8.94	34.05	5.16		100	8.95	34.05	26.41	163	0.285
150	10	7.96	34.04	4.82		150	7.95	34.04	26.53	152	0.365
199	10	4.94	33.75	5.53		200	4.95	33.75	26.71	135	0.438
294	10	4.44	33.87	5.01		300	4.40	33.87	26.86	120	0.568
391	10	4.09	34.00	2.91		400	4.05	34.02	27.02	105	0.683
629	16	3.59	34.25	1.48		500	3.85	34.11	27.11	97	0.788
822	16	2.95	34.29	1.14		600	3.65	34.22	27.22	86	0.884
1018	16	2.77	34.42	1.15		700	3.35	34.25	27.28	80	0.972
1205	16	2.50	34.45	1.12		800	3.20	34.29	27.32	77	1.055
						1000	2.80	34.40	27.44	65	1.208
						1200	2.50	34.45	27.51	59	1.345

1029 YUSHIO MARU; September 2, 1955; 1500-1600 GCT; 40°29'N, 145°00'E; 05 20 02 188 05x4 0135 1 xx x xx x x x x.

0		21.5	33.44	5.62	0.08	0	21.5	33.44	23.20	469	0.000
11	12	21.37	33.39	5.69	0.11	10	21.35	33.39	23.20	469	0.047
25	12	9.53	33.55	5.24	0.11	25	9.55	33.55	25.92	210	0.098
50	12	8.96	33.96	5.33	0.40	50	8.95	33.96	26.33	171	0.146
75	15	8.79	34.18	4.56	0.67	75	8.80	34.18	26.53	152	0.186
99	15	8.06	34.09	4.91	0.62	100	8.00	34.09	26.58	147	0.224
159	30	5.27	33.87	5.24	0.89	150	5.70	33.87	26.75	131	0.295
210	30	4.60	33.82	4.50	-	200	4.75	33.84	26.80	126	0.360
302	30	2.59	33.77	4.02	1.27	300	2.65	33.77	26.95	112	0.481
400	30	2.63	33.89	2.36	1.46	400	2.65	33.89	27.05	102	0.590
604	40	2.96	34.15	1.31	1.44	500	2.80	34.02	27.16	92	0.689
800	40	3.21	34.38	1.11	1.25	600	2.95	34.15	27.23	85	0.781
988	40	2.90	34.40	1.10	1.50	700	3.10	34.27	27.31	81	0.869
1182	40	2.60	34.49	1.16	1.35	800	3.20	34.38	27.40	69	0.949
						1000	2.85	34.40	27.44	65	1.094
						1200	(2.55)	(34.49)	(27.53)	(57)	(1.229)

1030 YUSHIO MARU; September 2, 1955; 2210-2300 GCT; 40°27'N, 144°00'E; 0520 02 181 05x4 0546 1 15-13 3 xx x 2 x x.

0		19.5	33.15	5.85	0.10	0	19.5	33.15	23.51	439	0.000
10	20	19.32	33.06	5.86	0.11	10	19.30	33.06	23.48	442	0.044
25	20	14.32	33.06	7.06	0.13	25	14.30	33.06	24.64	331	0.102
48	20	3.82	33.22	7.07	0.77	50	3.80	33.22	26.41	163	0.164
79	24	3.25	33.31	6.81	-	75	3.30	33.31	26.53	152	0.203
98	24	2.37	33.39	6.43	0.90	100	2.35	33.39	26.68	137	0.240
156	30	1.56	33.44	6.10	1.10	150	1.65	33.44	26.77	129	0.307
201	30	2.04	33.57	4.60	1.22	200	2.05	33.57	26.84	122	0.370
293	30	2.45	33.77	3.26	-	300	2.45	33.78	26.99	108	0.486
390	30	2.76	33.95	1.99	1.33	400	2.75	33.96	27.10	98	0.591
573	50	2.92	34.16	1.22	1.22	500	2.85	34.07	27.18	90	0.688
762	50	2.87	34.33	1.13	1.27	600	2.90	34.18	27.26	82	0.777
967	50	2.64	-	-	-	700	2.90	34.27	27.33	76	0.861
1160	50	2.46	-	-	-	800	2.80				
						1000	2.60				
						1200	(2.40)				

YUSHIO MARU; September 3, 1955; 0525-0625 GCT; 40°27'N, 142°58'E; 0109 03 177 36x2 0544 1 20-03 3 1535-3 x x x x. 1031

OBSERVED					
Z	W	T	S	O_2	PO_4-P
m	*°	°C	‰	ml/L	µg at/L
0		17.9	33.10	5.86	
10	5	17.40	33.03	5.97	
25	5	11.21	33.62	6.81	
50	5	9.80	33.78	6.10	
75	3	4.47	33.26	6.67	
100	3	2.52	33.59	6.56	
150	11	1.42	33.48	7.05	
198	11	1.50	33.73	5.92	
297	11	1.69	-	4.46	
395	11	2.54	-	2.72	
594	10	2.95	-	1.72	
794	10	2.96	-	0.97	
981	10	2.81	-	1.05	
1184	10	2.51	-	1.06	

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	17.9	33.10	23.86	406	0.000
10	17.40	33.03	23.93	399	0.040
25	11.20	33.62	25.69	231	0.088
50	9.80	33.78	26.06	196	0.141
75	4.45	33.26	26.37	167	0.187
100	2.50	33.59	26.82	124	0.223
150	1.40	33.48	26.82	124	0.286
200	1.50	33.71	27.00	107	0.344
300	1.70				
400	2.55				
500	2.75				
600	2.95				
700	2.95				
800	2.95				
1000	2.75				
1200	(2.50)				

OBSERVATIONS OF THE JAPANESE HYDROGRAPHIC OFFICE

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OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⊀°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

KAIYO MARU; August 2, 1955; 1225–1320 GCT; 34°46'N, 139°54'E; 2318 02 263 23x2 23x2 5 x x 1150–3 x x x x. D–1

0		24.4	34.09	5.09	8.30	0	24.4	34.09	22.86	501	0.000
10		24.00	34.11	4.97	8.30	10	24.00	34.11	22.99	489	0.049
25		22.59	34.22	5.22	8.30	25	22.59	34.22	23.49	441	0.119
50		19.02	34.40	4.74	8.30	50	19.02	34.40	24.57	338	0.217
60	67	15.94	34.52	4.09	8.25	100	13.75	34.45	25.83	218	0.357
75	67	14.83	34.45	3.94	8.20	150	11.71	34.36	26.15	187	0.460
101	67	13.75	34.45	3.81	8.05	200	11.08	34.34	26.26	177	0.553
155	67	11.56	34.36	3.50	8.00	300	9.20	34.31	26.57	148	0.721
170	74	11.30	34.36	3.43	8.05	400	(8.09)	(34.27)	(26.76)	(134)	(0.868)
205	74	11.06	34.34	3.34	8.00						
260	74	9.90	34.33	3.25	8.00						
390	74	8.19	34.27	2.93	7.95						

KAIYO MARU; August 2, 1955; 0910–1015 GCT; 34°32'N, 140°06'E; 2519 02 272 25x2 23x3 5 26–7 3 2190–3 x x x x. D–2

0		27.0	34.00	4.73	8.30	0	27.0	34.00	21.98	585	0.000
10		26.98	34.00	4.71	8.30	10	26.98	34.00	22.00	583	0.058
25		26.88	34.05	4.74	8.30	25	26.88	34.05	22.06	578	0.145
50		22.85	34.63	4.84	8.30	50	22.85	34.63	23.72	419	0.270
103	32	20.00	34.69	4.45	8.30	100	20.18	34.69	24.50	345	0.462
148	32	16.40	34.65	4.57	8.30	150	16.32	34.65	25.43	256	0.614
193	32	15.29	34.60	4.40	8.25	200	15.11	34.60	25.65	235	0.740
287	32	13.08	34.49	3.88	8.20	300	12.84	34.47	26.03	199	0.963
337	46	12.14	34.43	3.76	8.10	400	9.83	34.36	26.50	154	1.148
402	46	9.74	34.36	3.19	7.95	500	7.00	34.24	26.84	122	1.293
459	46	7.76	34.25	2.75	7.90	600	5.67	34.24	27.02	105	1.413
618	46	5.44	34.24	2.14	7.80	800	3.88	34.31	27.27	82	1.613
716	57	4.31	34.25	1.63	7.70	1000	3.44	34.42	27.40	69	1.777
945	57	3.53	34.40	1.29	7.70	1200		(34.47)			
1138	57	2.93	34.45	1.42	7.70						

KAIYO MARU; August 2, 1955; 0500–0545 GCT; 34°00'N, 139°59'E; 2319 02 286 23x3 27x3 5 37–15 3 1140 x x x x. D–3

0		27.5	34.36	4.63	8.30	0	27.5	34.36	22.10	574	0.000
10		27.37	34.36	4.67	8.30	10	27.37	34.36	22.14	570	0.057
25		27.18	34.38	4.71	8.30	25	27.18	34.38	22.22	562	0.142
50		24.22	34.63	4.80	8.30	50	24.22	34.63	23.32	457	0.270
108	40	20.30	34.79	4.58	8.30	100	20.50	34.79	24.48	347	0.472
155	40	19.26	34.74	4.53	8.30	150	19.32	34.76	24.77	319	0.641
202	40	18.03	34.69	4.46	8.20	200	18.13	34.69	25.02	295	0.797
298	40	16.19	34.63	4.35	8.20	300	16.12	34.63	25.45	254	1.078
411	42	11.24	34.36	3.46	8.05	400	11.64	34.38	26.19	184	1.307
503	42	8.96	34.25	3.00	7.95	500	9.08	34.25	26.54	150	1.482
598	42	5.75	34.24	2.13	7.80	600	5.71	34.24	27.00	107	1.618
791	42	3.74	34.33	1.50	7.75	800	3.64	34.33	27.31	78	1.815
988	42	3.13	34.42	1.23	7.70	1000	3.12	34.42	27.45	66	1.970

KAIYO MARU; August 2, 1955; 0015–0045 GCT; 33°26'N, 140°04'E; 2914 02 281 29x2 29x2 5 41–38 2 430–3 x x x. D–4

0		27.4	34.42	4.65	8.30	0	27.4	34.42	22.18	566	0.000
10		27.18	34.42	4.66	8.30	10	27.18	34.42	22.25	559	0.056
25		26.93	34.43	4.67	8.30	25	26.93	34.43	22.33	552	0.140
50		24.92	34.65	4.78	8.30	50	24.92	34.65	23.13	475	0.268
115	28	19.60	34.76	4.30	8.20	100	20.61	34.76	24.44	350	0.476
162	28	17.16	34.69	4.61	8.20	150	17.54	34.70	25.17	281	0.636
209	28	16.13	34.65	4.61	8.20	200	16.36	34.65	25.42	257	0.773
304	28	12.79	34.42	4.04	8.10	300	12.93	34.42	25.97	205	1.010
399	28	10.03	34.27	3.72	8.00	(400)	(10.03)	(34.27)	(26.39)	(165)	(1.204)

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OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⊀°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
D-5	KAIYO MARU; August 1, 1955; 2020-2055 GCT; 33°01'N, 140°11'E; 2714 02 272 27x2 27x2 5 34-10 2 610-3 x x x x.											
0		27.8	33.73	4.63		8.30	0	27.8	33.73	21.52	629	0.000
10		27.84	33.71	4.62		8.30	10	27.84	33.71	21.49	632	0.063
25		27.85	33.98	4.61		8.30	25	27.85	33.98	21.68	614	0.156
50		25.19	34.25	4.83		8.30	50	25.19	34.25	22.74	512	0.298
113	40	21.06	34.69	4.16		8.30	100	21.92	34.63	23.98	394	0.525
153	40	18.44	34.74	4.08		8.20	150	18.61	34.74	24.94	302	0.701
198	40	15.95	34.63	4.02		8.15	200	15.80	34.63	25.53	246	0.841
293	40	11.82	34.42	3.52		8.10	300	11.65	34.42	26.22	181	1.061
380	40	9.15	34.22	3.14		7.95	400	8.44	34.22	26.62	143	1.231
473	40	5.59	34.00	3.31		7.85	500	(4.98)				
D-6	KAIYO MARU; August 1, 1955; 1510-1600 GCT; 32°29'N, 140°15'E; 2314 02 276 23x1 27x2 5 x x 1690-3 x x x x.											
0		27.7	33.24	4.62		8.30	0	27.7	33.24	21.19	661	0.000
10		27.90	33.26	4.66		8.30	10	27.90	33.26	21.15	665	0.066
25		27.91	33.28	4.65		8.30	25	27.91	33.28	21.15	665	0.166
50		24.86	34.13	4.89		8.30	50	24.86	34.13	22.75	511	0.313
115	31	21.13	34.65	4.18		8.30	100	21.87	34.65	24.01	391	0.540
158	31	18.91	34.69	4.02		8.30	150	19.35	34.69	24.72	324	0.721
194	31	16.00	34.61	4.19		8.20	200	15.79	34.61	25.52	247	0.867
255	31	15.61	34.61	4.12		8.20	300	14.02	34.58	25.88	213	1.103
323	31	13.78	34.54	4.04		8.10	400	10.17	34.34	26.43	161	1.299
415	46	9.27	34.31	3.07		7.95	500	7.25	34.27	26.83	123	1.448
484	46	7.54	34.27	2.79		7.85	600	5.96	34.27	27.00	107	1.569
634	46	5.64	34.27	2.08		7.80	800	4.40	34.29	27.20	88	1.778
800	46	4.40	34.29	1.62		7.75	1000	(3.46)	(34.43)	(27.42)	(67)	(1.947)
980	46	3.53	34.42	1.57		7.70						
D-7	KAIYO MARU; August 1, 1955; 1100-1143 GCT; 32°00'N, 140°15'E; 3102 02 282 31x1 31x2 5 x x 1900-3 x x x x.											
0		28.6	34.02	4.60		8.30	0	28.6	34.02	21.49	632	0.000
10		28.50	34.00	4.71		8.30	10	28.50	34.00	21.50	631	0.063
25		28.20	34.18	4.60		8.30	25	28.20	34.18	21.74	608	0.156
50		25.01	34.61	4.77		8.30	50	25.01	34.61	23.06	482	0.293
105	6	22.41	34.79	4.42		8.30	100	22.67	34.78	23.89	403	0.515
154	6	20.30	34.83	4.36		8.20	150	20.44	34.83	24.54	341	0.703
204	6	18.77	34.78	4.66		8.20	200	18.85	34.78	24.92	304	0.868
303	6	16.02	34.65	4.39		8.15	300	16.10	34.65	25.48	251	1.153
405	6	13.47	34.47	4.08		8.15	400	13.58	34.49	25.90	211	1.394
503	6	10.04	34.29	3.49		8.00	500	10.18	34.29	26.39	165	1.591
604	6	8.08	34.24	2.97		7.90	600	8.11	34.24	26.68	137	1.751
800	6	5.41	34.25	1.99		7.75	800	5.41	34.25	27.05	102	2.008
1000	6	3.96	34.36	1.54		7.70	1000	3.96	34.36	27.30	79	2.206
D-8	KAIYO MARU; August 1, 1955; 0625-0700 GCT; 31°30'N, 140°18'E; 2506 02 295 25x1 27x2 5 36-x 2 1270-3 x x x.											
0		28.4	34.40	4.61		8.30	0	28.4	34.40	21.84	599	0.000
10		27.78	34.29	4.64		8.30	10	27.78	34.29	21.96	587	0.059
25		27.23	34.31	4.69		8.30	25	27.23	34.31	22.15	569	0.146
50		25.56	34.43	4.92		8.30	50	25.56	34.43	22.77	510	0.281
106	21	20.96	-	4.83		8.30	100	21.32	34.79	24.27	367	0.502
155	21	19.58	34.81	4.69		8.30	150	19.68	34.81	24.73	323	0.676
204	21	18.93	34.79	4.53		8.20	200	19.00	34.79	24.88	308	0.837
302	21	16.08	34.65	4.50		8.20	300	16.11	34.65	25.48	251	1.124
430	17	13.18	34.45	4.04		8.10	400	14.02	34.51	25.82	219	1.370
528	17	10.48	34.31	3.58		8.00	500	11.18	34.34	26.25	178	1.579
625	17	8.29	34.24	2.95		7.90	600	8.81	34.25	26.58	147	1.751
823	17	5.56	34.25	1.99		7.80	800	5.83	34.25	27.00	107	2.025
1020	17	4.20	34.36	1.61		7.70	1000	4.27	34.34	27.27	82	2.233

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

KAIYO MARU; August 1, 1955; 0140-0240 GCT; 31°00'N, 140°22'E; 2706 02 288 27x1 29x2 5 34-x 2 2200-3 x x x x. D-9

0		28.3	34.45	4.62	8.35	0	28.3	34.45	21.90	593	0.000
10		27.82	34.42	4.66	8.35	10	27.82	34.42	22.03	580	0.059
25		27.03	34.43	4.75	8.30	25	27.03	34.43	22.30	555	0.144
50		25.04	34.65	4.88	8.30	50	25.04	34.65	23.08	480	0.273
104	6	20.72	34.70	5.31	8.25	100	21.02	34.70	24.28	366	0.486
154	6	18.26	34.76	4.80	8.20	150	18.39	34.76	25.01	296	0.654
203	6	17.10	34.70	4.74	8.20	200	17.12	34.70	25.27	271	0.798
303	6	16.09	34.65	4.70	8.20	300	16.13	34.65	25.47	252	1.067
390		14.22	34.58	4.21	8.10	400	13.98	34.58	25.89	212	1.309
485		11.57	34.47	3.73	8.00	500	11.04	34.45	26.35	168	1.510
580		8.98	34.25	3.20	7.90	600	8.55	34.24	26.62	143	1.675
770		6.05	34.22	2.25	7.75	800	5.69	34.24	27.02	105	1.943
1004		4.03	34.36	1.57	7.75	1000	4.04	34.36	27.29	80	2.146
1201		3.23	34.43	1.55	7.70	1200	3.23	34.43	27.43	66	2.312
1499		2.45	34.52	1.71	7.70	1500	(2.45)	(34.52)	(27.57)	(53)	(2.514)

KAIYO MARU; July 31, 1955; 2000-2130 GCT; 30°28'N, 140°27'E; 0000 02 269 00x0 31x2 5 36-x 2 950-3 x x x x. D-10

0		27.8	34.51	4.63	8.35	0	27.8	34.51	22.12	572	0.000
10		27.79	34.49	4.58	8.35	10	27.79	34.49	22.10	574	0.057
25		27.12	34.58	4.86	8.35	25	27.12	34.58	22.38	547	0.141
54	20	23.17	34.65	4.73	8.30	50	23.58	34.63	23.51	439	0.265
99	20	19.60	34.79	5.34	8.30	100	19.60	34.79	24.73	323	0.456
137	33	18.31	34.78	5.22	8.30	150	18.00	34.78	25.12	285	0.610
184	33	17.46	34.78	4.75	8.25	200	17.26	34.76	25.29	269	0.752
270	43	16.42	34.70	4.72	8.25	300	15.81	34.65	25.54	245	1.016
350	43	14.39	34.60	4.24	8.15	400	12.74	34.52	26.08	194	1.246
430	43	11.79	34.61	3.90	8.05	500	9.69	34.34	26.51	153	1.429
513	43	9.22	34.33	3.44	7.95	600	6.95	34.22	26.83	123	1.576
675	43	5.20	34.15	2.46	7.75	800	(3.90)				

KAIYO MARU; July 31, 1955; 1510-1620 GCT; 30°03'N, 140°30'E; 0000 02 272 00x0 31x2 5 x x 2660-3 x x x x. D-11

0		27.7	34.45	4.65	8.35	0	27.7	34.45	22.10	574	0.000
10		27.27	34.43	4.72	8.35	10	27.27	34.43	22.22	562	0.057
25		25.69	34.42	4.85	8.35	25	25.69	34.42	22.72	514	0.137
50		21.59	34.67	5.27	8.30	50	21.59	34.67	24.11	382	0.250
103	15	18.88	34.78	4.94	8.30	100	18.95	34.78	24.88	308	0.423
151	15	17.70	34.76	4.61	8.30	150	17.70	34.76	25.18	280	0.572
200	15	16.63	34.70	4.68	8.20	200	16.63	34.70	25.38	261	0.710
298	15	14.99	34.61	4.15	8.15	300	14.96	34.61	25.70	230	0.963
308	23	14.86	34.60	4.20	8.10	400	12.41	34.43	26.08	194	1.184
400	23	12.41	34.43	3.98	8.10	500	9.56	34.24	26.45	159	1.370
585	23	7.55	34.13	3.50	7.95	600	7.28	34.13	26.72	133	1.524
770	23	4.80	34.18	3.00	7.80	800	4.63	34.20	27.10	98	1.771
998	18	3.85	34.36	1.34	7.75	1000	3.82	34.36	27.32	77	1.961
1194	18	3.08	34.45	1.34	7.75	1200	3.07	34.45	27.46	64	2.120
1487	18	2.43	34.54	1.60	7.75	1500	(2.41)	(34.54)	(27.59)	(51)	(2.315)

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⁄°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

E-1

KAIYO MARU; July 18, 1955; 0150–0300 GCT; 33°20'N, 135°44'E; 0529 02 269 05x3 05x5 5 22–x 2 1610–3 x x x x.

0		26.3	34.04	4.72	8.35	0	26.3	34.04	22.24	560	0.000
10		26.25	34.05	4.73	8.30	10	26.25	34.05	22.26	559	0.056
25		26.09	34.07	4.75	8.30	25	26.09	34.07	22.32	553	0.139
50		20.64	34.42	5.32	8.30	50	20.64	34.42	24.18	375	0.256
94	32	17.37	34.54	4.72	8.20	100	17.27	34.56	25.13	284	0.421
134	40	17.04	34.58	4.42	8.20	150	16.06	34.56	25.42	257	0.558
138	58	17.07	34.56	4.50	8.20	200	13.59	34.49	25.90	211	0.678
199	58	13.59	34.49	3.82	8.10	300	10.60	34.34	26.35	168	0.873
276	58	11.50	34.42	3.48	8.00	400	8.02	34.24	26.69	136	1.032
315	68	10.03	34.31	3.29	7.95	500	6.57	34.22	26.88	118	1.165
370	68	8.60	34.25	2.85	7.85	600	5.56	34.22	27.01	106	1.283
480	68	6.81	34.22	2.42	7.80	800	4.14	34.27	27.21	87	1.489
867	61	3.75	34.31	1.57	7.70						

E-1'

KAIYO MARU; July 21, 1955; 1013–1032 GCT; 33°19'N, 135°46'E; 0000 02 272 00x0 18x4 5 x 3 1640–3 x x x x.

0		26.5	33.86	4.75	8.30	0	26.5	33.86	22.05	578	0.000
10		25.55	33.89	4.78	8.30	10	25.55	33.89	22.36	549	0.056
25		25.10	33.91	–	8.30	25	25.10	33.91	22.50	536	0.138
50		21.17	34.47	5.17	8.30	50	21.17	34.47	24.06	387	0.253
111	12	16.04	34.56	4.22	8.15	100	16.40	34.56	25.34	264	0.417
161	12	15.24	34.58	4.09	8.10	150	15.41	34.58	25.57	243	0.546
210	12	14.03	34.52	3.90	8.10	200	14.35	34.54	25.78	223	0.664
309	12	10.29	34.34	3.21	7.95	300	10.57	34.36	26.37	167	0.865
409	12	8.43	34.27	2.82	7.90	400	8.55	34.27	26.64	141	1.026

E-2

KAIYO MARU; July 18, 1955; 0545–0655 GCT; 33°00'N, 135°45'E; 0525 02 268 05x3 05x5 2 22–x 3 x x x x.

0		25.4	33.91	4.80	8.35	0	25.4	33.91	22.42	543	0.000
10		25.35	33.86	4.82	8.30	10	25.35	33.86	22.40	545	0.054
25		25.12	33.89	4.87	8.30	25	25.12	33.89	22.49	537	0.135
50		20.34	34.49	5.46	8.30	50	20.34	34.49	24.30	364	0.248
100	45	16.21	34.58	4.33	8.20	100	16.21	34.58	25.40	259	0.405
140	45	14.74	34.56	4.06	8.10	150	14.34	34.54	25.78	223	0.527
185	45	12.91	34.47	3.69	8.05	200	12.22	34.43	26.12	190	0.633
274	45	9.60	34.31	3.09	7.95	300	8.98	34.29	26.58	147	0.806
377	53	7.49	34.24	2.73	7.85	400	7.13	34.24	26.82	124	0.948
469	53	6.14	34.24	2.23	7.80	500	5.79	34.24	27.00	107	1.068
560	53	5.27	34.24	1.88	7.75	600	4.99	34.24	27.10	97	1.176
750	53	4.06	–	–	8.00	800	3.84	34.33	27.29	80	1.367
942	52	3.41	34.40	1.52	7.70	1000	3.20	34.42	27.43	66	1.526
1136	52	3.01	34.49	1.68	7.70	1200	2.90	34.51	27.53	57	1.666
1428	52	2.50	34.52	1.86	7.70	1500		(34.52)			

E-2'

KAIYO MARU; July 21, 1955; 1240–1305 GCT; 32°58'N, 135°48'E; 0000 02 258 00x0 16x3 2 x x 3050–3 x x x x.

0		26.3	33.60	4.75	8.30	0	26.3	33.60	21.90	593	0.000
10		25.98	33.98	4.75	8.30	10	25.98	33.98	22.30	555	0.057
25		25.58	33.95	4.83	8.30	25	25.58	33.95	22.40	545	0.140
50		24.77	33.93	4.87	8.30	50	24.77	33.93	22.63	523	0.274
119	13	16.88	34.65	4.36	8.20	100	18.41	34.51	24.82	314	0.484
168	13	14.64	34.58	3.98	8.10	150	15.30	34.63	25.64	236	0.623
218	13	13.11	34.47	3.74	8.10	200	13.81	34.51	25.86	215	0.738
317	13	9.31	34.29	3.11	7.95	300	9.90	34.33	26.46	158	0.930
416	13	7.39	34.29	2.64	7.90	400	7.68	34.27	26.77	129	1.081

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2		pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L			m	°C	‰	g/L	$10^5 cm^3/g$	dyn. m

KAIYO MARU; July 21, 1955; 1635-1725 GCT; 32°22'N, 136°05'E; 2708 01 266 27x0 14x3 2 x x 2540-3 x x x x. E-3

0		27.6	34.43	4.53	8.35	0	27.6	34.43	22.12	572	0.000
10		27.40	34.43	4.56	8.35	10	27.40	34.43	22.19	565	0.057
25		27.30	34.47	4.54	8.30	25	27.30	34.47	22.25	559	0.141
50		26.29	34.61	4.64	8.30	50	26.29	34.61	22.67	519	0.276
106	15	23.66	34.83	4.43	8.30	100	24.00	34.83	23.53	437	0.516
155	15	20.11	34.67	4.06	8.20	150	20.48	34.67	24.40	354	0.716
203	15	16.89	34.67	3.85	8.15	200	17.11	34.67	25.25	273	0.876
300	15	12.34	34.43	3.52	8.05	300	12.34	34.43	26.10	192	1.115
395	15	9.41	34.31	3.00	8.00	400	9.22	34.31	26.56	149	1.293
418	35	8.57	34.31	2.79	7.90	500	6.82	34.25	26.87	119	1.434
490	35	6.99	34.25	2.48	7.85	600	5.60	34.27	27.05	102	1.550
635	35	5.34	34.31	2.04	7.75	800	(4.09)	(34.31)	(27.25)	(83)	(1.748)
785	35	4.12	34.31	1.47	7.70						

KAIYO MARU; July 21, 1955; 2010-2110 GCT; 32°00'N, 135°57'E; 2704 01 266 27x0 14x3 2 34-x 2 x x x x x. E-4

0		27.3	34.45	4.54	8.40	0	27.3	34.45	22.22	562	0.000
10		27.32	34.43	4.51	8.40	10	27.32	34.43	22.20	564	0.056
25		27.29	34.42	4.55	8.35	25	27.29	34.42	22.20	564	0.141
50		24.65	34.72	4.67	8.35	50	24.65	34.72	23.26	463	0.270
100	5	22.38	34.83	4.34	8.30	100	22.38	34.83	24.01	391	0.484
150	5	20.26	34.83	4.67	8.30	150	20.26	34.83	24.59	336	0.668
200	5	18.99	34.78	4.11	8.30	200	18.99	34.78	24.88	308	0.832
300	5	17.00	34.70	4.12	8.25	300	17.00	34.70	25.30	268	1.128
408	6	13.89	34.54	3.79	8.10	400	14.15	34.56	25.83	218	1.381
508	6	10.00	34.29	3.61	8.00	500	10.35	34.29	26.35	168	1.584
607	6	8.42	34.29	2.77	7.85	600	8.53	34.29	26.65	140	1.748
805	6	5.32	34.25	1.77	7.75	800	5.39	34.25	27.06	102	2.009
1015	16	3.94	34.40	1.37	7.75	1000	4.07	34.38	27.23	85	2.213
1210	16	3.23	34.52	1.58	7.75	1200	3.29	34.52	27.50	60	2.378
1505	16	2.60	34.54	1.78	7.75	1500	2.60	34.54	27.58	52	2.569

KAIYO MARU; July 22, 1955; 0025-0110 GCT; 31°32'N, 135°48'E; 2506 03 273 25x0 14x4 2 32-x 2 x x x x x. E-5

0		26.4	34.33	4.67	8.40	0	26.4	34.33	22.41	544	0.000
10		26.08	34.33	4.67	8.35	10	26.08	34.33	22.53	533	0.054
25		25.97	34.31	4.71	8.35	25	25.97	34.31	22.55	531	0.134
50		23.17	34.67	5.09	8.35	50	23.17	34.67	23.66	425	0.253
115	18	21.02	34.85	4.63	8.30	100	21.40	34.83	24.28	366	0.452
164	18	20.11	34.83	4.67	8.30	150	20.32	34.85	24.58	337	0.630
212	18	19.34	34.81	4.72	8.30	200	19.57	34.81	24.75	321	0.798
310	18	17.84	34.76	4.44	8.25	300	18.04	34.76	25.10	287	1.110
406	18	15.87	34.65	4.37	8.15	400	15.96	34.65	25.51	248	1.389
519	24	13.42	34.49	4.01	8.10	500	13.85	34.51	25.85	216	1.633
614	24	10.65	34.36	3.62	8.00	600	11.03	34.38	26.30	173	1.840
806	24	6.40	34.22	2.26	7.80	800	6.50	34.22	26.89	117	2.153
1000	24	4.61	34.34	1.61	7.75	1000	4.61	34.34	27.22	86	2.376

JHO

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

E-6

KAIYO MARU; July 22, 1955; 0500-0600 GCT; 31°00'N, 135°41'E; 2310 03 286 23x1 23x3 2 30-x 2 4220-3 x x x x.

0		26.8	34.47	4.61	8.40	0	26.8	34.47	22.40	545	0.000
10		25.69	34.42	4.69	8.35	10	25.69	34.42	22.72	514	0.053
25		25.64	34.43	4.71	8.35	25	25.64	34.43	22.74	512	0.130
50		23.92	34.58	4.95	8.35	50	23.92	34.58	23.37	453	0.251
102	28	21.39	34.87	4.85	8.30	100	21.49	34.87	24.29	365	0.457
149	28	20.30	34.87	4.67	8.30	150	20.30	34.87	24.60	335	0.634
194	28	19.65	34.85	4.71	8.30	200	19.57	34.85	24.78	318	0.800
288	28	18.87	34.83	4.60	8.30	300	18.70	34.83	25.00	297	1.116
421	38	16.25	34.70	4.31	8.20	400	16.68	34.74	25.41	258	1.405
514	38	14.41	34.58	4.12	8.15	500	14.69	34.60	25.75	225	1.660
610	38	11.49	34.51	3.70	8.00	600	11.80	34.51	26.27	176	1.875
803	38	6.65	34.24	2.62	7.80	800	6.75	34.24	26.88	118	2.195
1027	37	4.50	34.38	1.59	7.70	1000	4.65	34.34	27.22	86	2.420
1210	37	3.59	34.42	1.43	7.70	1200	3.65	34.42	27.38	71	2.599
1390	37	2.89	34.51	1.54	7.65						

E-7

KAIYO MARU; July 22, 1955; 0930-1005 GCT; 30°31'N, 135°55'E; 2310 01 272 23x1 23x3 2 29-x 2 4820-3 x x x x.

0		26.8	34.36	4.68	8.35	0	26.8	34.36	22.33	552	0.000
10		26.17	34.34	4.63	8.35	10	26.17	34.34	22.50	536	0.054
25		25.90	34.40	4.74	8.35	25	25.90	34.40	22.64	522	0.134
50		22.81	34.74	5.08	8.35	50	22.81	34.74	23.82	409	0.250
102	13	21.62	34.85	4.64	8.30	100	21.64	34.85	24.23	370	0.446
160	10	20.60	34.85	4.57	8.30	150	20.81	34.85	24.45	349	0.628
210	10	19.69	34.83	4.53	8.30	200	19.86	34.83	24.69	327	0.800
310	10	17.85	34.78	4.35	8.25	300	18.04	34.79	25.12	285	1.114
415	13	15.82	34.65	4.30	8.15	400	16.03	34.67	25.50	249	1.393
515	13	13.60	34.49	3.98	8.05	500	14.00	34.51	25.83	218	1.639
614	13	10.86	34.33	3.77	8.00	600	11.22	34.34	26.24	179	1.850
812	13	6.84	34.22	2.47	7.80	800	7.05	34.22	26.82	124	2.177
1010	13	4.41	34.29	1.49	7.75	1000	4.45	34.29	27.20	88	2.410

500

KAIYO MARU; July 14, 1955; 0745-0810 GCT; 34°32'N, 137°53'E; 1121 02 277 11x4 14x4 5 20-x 3 340-3 x x x x.

0		27.1	34.07		8.30	0	27.1	34.07	22.00	583	0.000
10		26.77	34.11		8.30	10	26.77	34.11	22.15	569	0.058
25		22.77	34.33		8.30	25	22.77	34.33	23.52	438	0.133
50		19.94	34.49		8.30	50	19.94	34.49	24.41	353	0.232
100	37	16.46	34.61		8.15	100	16.46	34.61	25.36	263	0.387
143	37	14.46	34.60		8.10	150	14.11	34.60	25.87	214	0.508
185	37	12.94	34.58		8.10	200	12.48	34.56	26.17	186	0.611
272	37	10.86	34.38		8.00	300	(10.35)	(34.33)	(26.39)	(165)	(0.792)

501

KAIYO MARU; July 14, 1955; 0255-0350 GCT; 34°28'N, 138°33'E; 0919 02 274 09x4 09x5 5 23-x 3 2930-3 x x x x.

0		26.8	33.93		8.35	0	26.8	33.93	22.00	583	0.000
10		26.60	33.95		8.30	10	26.60	33.95	22.08	576	0.058
25		23.45	34.13		8.30	25	23.45	34.13	23.17	472	0.136
50		20.48	34.49		8.30	50	20.48	34.49	24.27	367	0.242
103	6	15.73	34.58		8.20	100	15.82	34.58	25.48	251	0.397
153	6	14.00	34.51		8.10	150	14.13	34.51	25.79	222	0.517
224	10	12.16	34.43		8.00	200	12.71	34.45	26.03	199	0.625
323	10	9.73	34.34		7.90	300	10.30	34.36	26.42	162	0.811
422	10	7.56	34.27		7.85	400	7.98	34.29	26.74	131	0.964
516	15	6.52	34.25		7.80	500	6.69	34.25	26.89	117	1.094
614	15	5.75	34.27		7.70	600	5.88	34.27	27.02	105	1.211
810	15	4.37	34.34		7.70	800	4.45	34.34	27.24	84	1.414
1007	15	3.58	34.40		7.70	1000	3.61	34.40	27.37	72	1.585

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ϰ°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

KAIYO MARU; July 29, 1955; 0405-0442 GCT; 34°04'N, 138°22'E; 2323 02 275 23x3 27x3 2 30-x 2 502
3630-3 x x x x.

0		26.7	33.98	4.65	8.35	0	26.7	33.98	22.07	577	0.000
10		26.46	33.95	4.68	8.35	10	26.46	33.95	22.12	572	0.057
25		24.75	34.13	4.83	8.35	25	24.75	34.13	22.78	509	0.138
50		20.22	34.58	4.62	8.30	50	20.22	34.58	24.41	353	0.247
113	10	13.68	34.49	3.81	8.10	100	14.55	34.51	25.71	229	0.393
163	10	11.65	34.42	3.51	8.00	150	12.18	34.43	26.13	189	0.499
212	10	9.84	34.31	3.18	7.95	200	10.19	34.33	26.42	162	0.589
315	10	8.50	34.27	2.91	7.90	300	8.66	34.27	26.62	143	0.746
416	14	7.64	34.25	2.70	7.90	400	7.78	34.25	26.74	131	0.890
514	14	6.66	34.22	2.47	7.80	500	6.79	34.22	26.86	120	1.021
613	14	5.52	34.24	1.95	7.75	600	5.71	34.24	27.01	106	1.140
812	14	4.24	34.33	1.57	7.70	800	4.31	34.33	27.24	84	1.344
1010	14	3.57	34.40	1.47	7.70	1000	3.58	34.40	27.38	71	1.514

KAIYO MARU; July 29, 1955; 0020-0104 GCT; 34°28'N, 138°32'E; 2712 02 272 27x2 25x2 5 14-x 4 502'
2490-3 xxx.

0		26.5	33.75	4.78	8.30	0	26.5	33.75	21.96	587	0.000
10		25.64	33.84	4.87	8.30	10	25.64	33.84	22.28	557	0.057
25		22.81	34.27	4.98	8.30	25	22.81	34.27	23.45	445	0.132
50		18.08	34.58	4.32	8.20	50	18.08	34.58	24.95	301	0.226
97	23	14.89	34.54	4.03	8.15	100	14.73	34.54	25.69	231	0.360
141	23	13.14	34.47	3.72	8.00	150	12.84	34.45	26.00	202	0.470
186	23	11.82	34.42	3.53	8.00	200	11.50	34.40	26.23	180	0.568
280	23	9.71	34.33	3.70	8.00	300	9.21	34.31	26.56	149	0.737
432	39	6.78	34.22	2.43	7.85	400	7.22	34.24	26.81	125	0.880
519	39	5.81	34.24	2.19	7.80	500	6.01	34.22	26.96	111	1.003
612	39	5.21	34.27	1.87	7.75	600	5.28	34.27	27.09	99	1.113
801	39	4.27	–	1.60	7.70	800	4.27	34.36	27.27	82	1.307
994	39	3.50	34.40	1.59	7.70	1000	(3.48)	(34.40)	(27.38)	(71)	(1.474)

KAIYO MARU; July 29, 1955; 1030-1110 GCT; 33°54'N, 138°08'E; 2523 02 267 25x4 27x3 2 x x 503
3520-3 x x x x.

0		26.3	33.96	4.96	8.35	0	26.3	33.96	22.19	565	0.000
10		26.34	33.95	4.75	8.35	10	26.34	33.95	22.17	567	0.057
25		24.80	34.09	4.96	8.35	25	24.80	34.09	22.74	512	0.137
50		18.38	34.60	5.06	8.30	50	18.38	34.60	24.90	306	0.240
107	30	15.37	34.56	3.92	8.15	100	15.63	34.58	25.53	246	0.379
154	30	13.23	34.47	3.70	8.10	150	13.48	34.47	25.90	211	0.495
201	30	11.71	34.40	3.42	8.00	200	11.71	34.40	26.19	184	0.596
298	30	8.29	34.29	2.88	7.90	300	8.24	34.29	26.70	135	0.760
433	32	6.69	34.24	2.38	7.85	400	6.99	34.24	26.85	121	0.894
532	32	5.72	34.24	2.05	7.80	500	5.98	34.24	26.98	109	1.013
630	32	5.20	34.27	1.84	7.70	600	5.32	34.25	27.06	102	1.123
828	32	4.07	34.33	1.57	7.75	800	4.17	34.31	27.24	84	1.321
1026	32	3.56	34.43	1.56	7.70	1000	3.57	34.42	27.39	70	1.489

KAIYO MARU; July 29, 1955; 1520-1605 GCT; 33°23'N, 138°18'E; 2519 02 268 25x4 23x3 2 x x 504
3720-3 x x x x.

0		26.6	33.96	4.69	8.30	0	26.6	33.96	22.09	575	0.000
10		26.67	33.96	4.71	8.35	10	26.67	33.96	22.07	577	0.058
25		24.01	34.18	5.13	8.35	25	24.01	34.18	23.04	484	0.137
50		19.05	34.58	5.36	8.30	50	19.05	34.58	24.71	325	0.239
106	23	15.74	34.60	4.00	8.15	100	15.95	34.60	25.47	252	0.384
155	23	12.77	34.47	3.66	8.10	150	13.11	34.47	25.97	205	0.500
204	23	10.29	34.36	3.25	8.05	200	10.33	34.36	26.41	163	0.594
302	23	8.01	34.27	2.73	7.85	300	8.07	34.27	26.71	134	0.746
400	31	5.91	34.24	2.15	7.80	400	5.91	34.24	26.98	109	0.873
490	31	4.85	34.29	1.71	7.75	500	4.77	34.29	27.17	91	0.978
580	31	4.35	34.33	1.51	7.75	600	4.26	34.33	27.25	83	1.069
764	31	3.66	34.38	1.45	7.70	800	3.51	34.38	27.37	72	1.234
956	31	3.14	34.43	1.53	7.70	1000	(3.10)	(34.43)	(27.44)	(65)	(1.382)

505

KAIYO MARU; July 29, 1955; 2140-2225 GCT; 32°40'N, 138°28'E; 2519 02 276 25x4 23x3 2 38-x 2 x x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ϰ°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.1	34.02	4.63		8.35	0	27.1	34.02	21.97	586	0.000
10		26.90	34.02	4.64		8.35	10	26.90	34.02	22.03	580	0.058
25		24.12	34.15	4.94		8.35	25	24.12	34.15	22.98	490	0.138
50		18.51	34.58	4.64		8.25	50	18.51	34.58	24.84	312	0.239
109	35	15.02	34.61	3.82		8.10	100	15.56	34.61	25.57	243	0.379
151	35	12.50	34.51	3.56		8.05	150	12.51	34.51	26.12	190	0.489
197	35	10.85	34.38	3.32		8.00	200	10.69	34.38	26.38	166	0.580
291	35	8.00	34.25	2.79		7.90	300	7.83	34.25	26.73	132	0.734
395	34	6.16	34.24	2.21		7.80	400	6.08	34.24	26.97	110	0.860
486	34	5.25	34.27	1.85		7.75	500	5.13	34.29	27.12	96	0.968
578	34	4.50	34.40	1.61		7.70	600	4.34	34.38	27.28	81	1.060
765	34	3.60	34.38	1.49		7.70	800	3.45	34.40	27.38	71	1.222
952	34	3.13	34.45	1.60		7.70	1000	(3.04)	(34.47)	(27.48)	(62)	(1.366)

506

KAIYO MARU; July 30, 1955; 0505-0540 GCT; 32°05'N, 138°23'E; 2516 02 291 25x2 23x3 2 25-x 3 3470-3 x x x x.

0		27.6	33.04	4.57		8.35	0	27.6	33.04	21.08	672	0.000
10		27.05	32.94	4.75		8.35	10	27.05	32.94	21.18	662	0.067
25		25.17	33.57	4.91		8.35	25	25.17	33.57	22.24	560	0.158
50		21.58	34.40	5.13		8.30	50	21.58	34.40	23.90	402	0.279
90	40	18.12	34.61	4.35		8.20	100	17.24	34.61	25.18	280	0.450
130	40	15.16	34.58	4.09		8.15	150	14.49	34.56	25.76	225	0.578
168	40	13.87	34.52	3.88		8.10	200	12.02	34.47	26.19	184	0.683
250	40	9.78	34.33	3.17		8.00	300	8.50	34.27	26.65	140	0.850
270	56	9.16	34.27	3.06		7.90	400	6.68	34.25	26.90	116	0.984
332	56	7.94	34.29	2.77		7.90	500	5.41	34.25	27.05	102	1.097
391	56	6.88	34.25	2.45		7.85	600	4.56	34.29	27.18	90	1.198
508	56	5.33	34.25	1.95		7.80	800	(3.80)				
651	56	4.25	34.31	1.54		7.70						

507

KAIYO MARU; July 30, 1955; 1230-1315 GCT; 31°19'N, 138°15'E; 2716 02 273 27x2 23x2 2 x x x x x x x.

0		27.9	33.40	4.59		8.35	0	27.9	33.40	21.24	656	0.000
10		28.18	34.05	4.58		8.35	10	28.18	34.05	21.65	617	0.064
25		27.21	33.31	4.66		8.30	25	27.21	33.31	21.40	565	0.152
50		25.00	34.67	4.93		8.30	50	25.00	34.67	23.11	477	0.283
105	6	21.19	34.83	5.10		8.30	100	21.42	34.83	24.27	367	0.495
155	6	19.29	34.78	4.77		8.30	150	19.41	34.78	24.77	319	0.669
205	6	18.30	34.76	4.50		8.30	200	18.39	34.76	25.02	295	0.825
305	6	16.04	34.61	4.17		8.15	300	16.15	34.61	25.44	255	1.107
395	24	13.66	34.52	4.09		8.10	400	13.43	34.51	25.94	207	1.349
485	24	10.78	34.36	3.30		8.05	500	10.34	34.34	26.40	164	1.544
579	24	8.42	34.27	2.89		7.95	600	7.94	34.27	26.73	132	1.701
758	24	5.21	34.27	1.82		7.80	800	4.88	34.27	27.13	95	1.946
950	24	4.04	34.34	1.52		7.70	1000	(3.90)	(34.38)	(27.32)	(77)	(2.135)

508

KAIYO MARU; July 30, 1955; 1830-1930 GCT; 30°40'N, 138°13'E; 2710 02 270 27x1 23x2 2 x x 4080-3 x x x x.

0		27.3	34.40	4.59		8.35	0	27.3	34.40	22.19	565	0.000
10		27.19	34.36	4.63		8.30	10	27.19	34.36	22.20	564	0.056
25		26.63	34.29	4.68		8.30	25	26.63	34.29	22.32	553	0.140
50		23.36	34.61	5.14		8.30	50	23.36	34.61	23.56	435	0.264
104	16	21.18	34.81	4.71		8.30	100	21.28	34.81	24.30	364	0.465
154	16	19.83	34.83	4.65		8.30	150	19.89	34.83	24.69	327	0.640
203	16	19.21	34.81	4.85		8.30	200	19.24	34.81	24.83	313	0.803
303	16	17.43	34.72	4.37		8.25	300	17.49	34.72	25.20	278	1.106
408	16	15.35	34.61	4.32		8.15	400	15.51	34.61	25.57	243	1.377
505	16	12.73	34.47	3.89		8.10	500	12.84	34.49	26.04	198	1.609
600	16	10.56	34.34	3.24		8.00	600	10.56	34.34	26.36	168	1.804
791	16	6.56	34.25	2.33		7.80	800	6.42	34.25	26.93	113	2.108
984	16	4.50	34.47	1.67		7.75	1000	4.43	34.47	27.34	75	2.316

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2		pH	Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L			m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

KAIYO MARU; July 30-31, 1955; 2345-0020 GCT; 30°06'N, 138°11'E; 2706 02 292 xxxx 29x2 2 48-x 1 4230-3 x x x x. 509

0		28.3	34.33	4.59	8.35	0	28.3	34.33	21.82	601	0.000
10		27.90	34.31	4.61	8.35	10	27.90	34.31	21.93	590	0.060
25		26.92	34.29	4.67	8.35	25	26.92	34.29	22.23	561	0.146
50		24.87	34.52	4.94	8.30	50	24.87	34.52	23.04	484	0.277
99	8	21.98	34.81	4.84	8.30	100	21.98	34.81	24.11	382	0.495
148	8	20.91	34.81	4.54	8.30	150	20.88	34.81	24.41	353	0.680
198	8	19.84	34.79	4.61	8.25	200	19.81	34.79	24.68	328	0.854
298	8	17.78	34.76	4.33	8.25	300	17.70	34.76	25.18	280	1.166
418	10	15.63	34.61	4.29	8.20	400	15.98	34.63	25.49	250	1.442
516	10	12.76	34.45	3.89	8.10	500	13.19	34.49	25.98	204	1.681
615	10	9.78	34.29	3.47	8.00	600	10.20	34.31	26.40	164	1.876
813	10	6.12	34.27	2.26	7.80	800	6.33	34.27	26.95	111	2.173
1011	10	4.23	34.33	1.55	7.70	1000	4.28	34.33	27.25	83	2.387

KAIYO MARU; July 14, 1955; 1645-1753 GCT; 33°51'N, 136°23'E; 0919 02 266 09x2 09x5 5 x x x x x x x. 550

0		25.8	34.04		8.30	0	25.8	34.04	22.40	545	0.000
10		25.68	34.05		8.30	10	25.68	34.05	22.44	541	0.054
25		22.80	34.24		8.30	25	22.80	34.24	23.44	446	0.128
60	41	19.49	34.65		8.30	50	20.62	34.61	24.33	361	0.229
105	37	15.86	34.63		8.15	100	16.15	34.63	25.45	254	0.384
148	37	14.09	34.56		8.10	150	13.89	34.56	25.88	213	0.503
204	52	11.48	34.42		8.00	200	11.60	34.42	26.23	180	0.603
292	52	9.35	34.31		8.00	300	9.11	34.31	26.58	147	0.772
382	52	7.37	34.25		7.85	400	7.15	34.25	26.83	123	0.913
470	53	6.54	34.31		7.80	500	6.35	34.24	26.93	113	1.036
550	53	6.04	34.24		7.80	600	5.77	34.24	27.00	107	1.151
720	53	5.05	34.27		7.80	800	4.50	34.31	27.21	87	1.359
894	53	4.00	34.38		7.70	1000	(3.60)				

KAIYO MARU; July 23-24, 1955; 2345-0040 GCT; 33°56'N, 136°56'E; 1814 03 279 18x2 18x3 1 23-x 3 2200-3 x x x x. 551

0		26.2	34.11	4.68	8.35	0	26.2	34.11	22.31	554	0.000
10		26.12	34.09	4.72	8.35	10	26.12	34.09	22.33	552	0.055
25		22.20	34.51	5.05	8.35	25	22.20	34.51	23.81	410	0.127
50		19.11	34.70	4.29	8.25	50	19.11	34.70	24.78	318	0.219
103	10	16.25	34.61	4.08	8.15	100	16.41	34.61	25.38	261	0.365
152	10	14.26	34.52	4.04	8.10	150	14.32	34.52	25.77	224	0.487
200	10	12.19	34.42	3.56	8.05	200	12.19	34.42	26.12	190	0.593
298	10	9.32	34.31	2.96	7.95	300	9.28	34.31	26.55	149	0.768
404	18	6.70	34.25	2.07	7.85	400	6.74	34.25	26.88	118	0.907
500	18	5.93	34.24	2.08	7.80	500	5.93	34.24	26.98	109	1.025
596	18	5.23	34.25	1.93	7.75	600	5.21	34.25	27.08	100	1.134
788	18	3.95	34.34	1.50	7.75	800	3.88	34.34	27.30	79	1.325
981	18	3.32	34.40	1.51	7.70	1000	(3.28)	(34.40)	(27.40)	(69)	(1.486)

552 KAIYO MARU; July 23, 1955; 1825-1905 GCT; 33°23'N, 136°52'E; 2518 02 256 25x4 23x4 1 x x 2890-3 x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W σ_t°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		25.9	33.98	4.70		8.35	0	25.9	33.98	22.32	553	0.000
10		26.04	33.96	4.71		8.35	10	26.04	33.96	22.26	559	0.056
25		23.42	34.20	5.16		8.35	25	23.42	34.20	23.24	465	0.132
50		18.51	34.63	4.21		8.30	50	18.51	34.63	24.88	308	0.229
87	25	15.66	34.61	4.04		8.15	100	15.41	34.60	25.59	241	0.368
129	25	14.83	34.58	4.10		8.15	150	13.85	34.54	25.88	213	0.483
172	25	13.01	34.51	3.91		8.15	200	12.22	34.47	26.15	187	0.585
263	25	10.43	34.38	3.36		8.00	300	9.28	34.34	26.58	147	0.757
425	24	5.90	34.22	2.07		7.85	400	6.52	34.24	26.91	115	0.894
523	24	4.86	34.25	1.74		7.75	500	5.04	34.24	27.08	100	1.006
621	24	4.23	34.33	1.52		7.75	600	4.36	34.31	27.22	86	1.103
819	24	3.60	34.36	1.51		7.70	800	3.63	34.36	27.34	75	1.274
1015	24	3.09	34.43	1.56		7.70	1000	3.12	34.43	27.44	65	1.425

553 KAIYO MARU; July 23, 1955; 1310-1400 GCT; 32°40'N, 137°00'E; 2319 03 272 23x4 21x4 1 x x x x x x x.

0		26.7	33.78	4.67		8.35	0	26.7	33.78	21.92	591	0.000
10		26.54	33.78	4.67		8.35	10	26.54	33.78	21.98	585	0.059
25		19.41	34.52	4.88		8.35	25	19.41	34.52	24.57	338	0.128
50		16.90	34.60	4.02		8.30	50	16.90	34.60	25.25	273	0.205
108	37	14.00	34.52	3.76		8.05	100	14.47	34.54	25.75	225	0.330
152	37	11.22	34.38	3.33		8.00	150	11.30	34.40	26.27	176	0.432
197	37	9.66	34.31	3.12		7.95	200	9.55	34.31	26.50	154	0.516
290	37	7.80	34.27	2.71		7.85	300	7.62	34.27	26.77	129	0.662
380	51	6.26	34.25	2.19		7.80	400	6.06	34.25	26.98	109	0.786
462	51	5.42	34.24	1.85		7.80	500	5.04	34.25	27.09	99	0.895
545	51	4.55	34.29	1.59		7.70	600	4.20	34.33	27.26	83	0.990
721	51	3.60	34.36	1.49		7.70	800	3.38	34.38	27.38	71	1.154
907	51	3.12	34.42	1.41		7.70	1000		(34.43)			

554 KAIYO MARU; July 23, 1955; 0655-0735 GCT; 32°02'N, 137°07'E; 1819 03 284 18x2 23x3 1 32-x 2 4410-3 x x x x.

0		27.6	34.43	4.50		8.35	0	27.6	34.43	22.12	572	0.000
10		27.59	34.40	4.57		8.35	10	27.59	34.40	22.10	574	0.057
25		27.25	34.38	4.50		8.35	25	27.25	34.38	22.19	565	0.143
50		25.04	34.72	4.64		8.35	50	25.04	34.72	23.14	474	0.273
102	36	22.11	34.78	5.03		8.30	100	22.18	34.78	24.03	389	0.490
145	36	20.10	34.76	4.06		8.25	150	19.89	34.76	24.63	332	0.672
191	36	17.51	34.61	4.18		8.20	200	17.00	34.60	25.23	275	0.827
282	36	12.73	34.47	3.58		8.05	300	12.03	34.45	26.17	186	1.064
385	42	9.02	34.29	2.99		7.95	400	8.62	34.29	26.64	141	1.235
457	42	7.54	34.29	2.54		7.85	500	6.69	34.29	26.93	113	1.369
535	42	6.00	34.25	2.10		7.80	600	5.24	34.25	27.07	101	1.481
693	42	4.60	34.31	1.58		7.75	800	3.98	34.36	27.30	79	1.673
855	42	3.84	34.40	1.45		7.70						

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⊀°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

KAIYO MARU; July 23, 1955; 0145-0225 GCT; 31°20'N, 137°00'E; 2118 02 295 21x1 18x4 2 24-x 2 x x x x x. 555

0		27.2	34.40	4.61	8.35	0	27.2	34.40	22.23	561	0.000
10		26.38	34.40	4.67	8.35	10	26.38	34.40	22.48	536	0.055
25		26.28	34.38	4.70	8.35	25	26.28	34.38	22.49	536	0.135
50		23.07	34.60	5.06	8.35	50	23.07	34.60	23.64	426	0.256
111	26	20.86	34.83	5.03	8.30	100	21.12	34.81	24.34	360	0.454
160	26	19.71	34.83	4.63	8.30	150	19.87	34.83	24.69	327	0.628
208	26	19.05	34.81	4.70	8.25	200	19.14	34.81	24.86	310	0.790
307	26	17.16	34.74	4.33	8.20	300	17.30	34.76	25.28	270	1.087
423	24	14.50	34.56	4.12	8.10	400	14.94	34.60	25.69	231	1.348
519	24	11.62	34.38	3.69	8.00	500	12.28	34.42	26.10	192	1.571
615	24	8.85	34.24	3.16	7.90	600	9.24	34.25	26.51	153	1.753
808	24	5.60	34.22	1.97	7.75	800	5.70	34.22	26.99	108	2.034
1002	24	4.15	34.34	1.49	7.70	1000	4.16	34.34	27.27	82	2.242

KAIYO MARU; July 22, 1955; 2010-2105 GCT; 30°40'N, 136°58'E; 2108 02 266 21x1 18x4 2 25-x 3 x x x x x. 556

0		26.6	34.34	4.66	8.35	0	26.6	34.34	22.37	548	0.000
10		26.52	34.34	4.65	8.35	10	26.52	34.34	22.39	546	0.055
25		26.31	34.29	4.72	8.35	25	26.31	34.29	22.41	544	0.136
50		23.27	34.60	5.09	8.35	50	23.27	34.60	23.58	432	0.259
113	17	20.98	34.83	4.92	8.30	100	21.31	34.81	24.28	366	0.460
162	17	19.89	34.85	4.60	8.30	150	20.08	34.85	24.65	330	0.636
213	17	19.25	34.83	4.60	8.30	200	19.37	34.83	24.82	314	0.800
310	17	17.51	34.74	4.31	8.30	300	17.75	34.74	25.16	282	1.106
440	12	15.19	34.60	4.16	8.20	400	15.81	34.65	25.54	245	1.381
539	12	12.72	34.43	3.89	8.10	500	13.92	34.51	25.84	217	1.624
638	12	10.01	34.25	3.51	8.00	600	10.89	34.31	26.28	175	1.833
837	12	6.40	34.18	2.33	7.80	800	6.98	34.18	26.80	126	2.158
1035	12	4.50	34.31	1.53	7.70	1000	4.70	34.27	27.15	93	2.398

KAIYO MARU; July 22, 1955; 1643-1735 GCT; 30°17'N, 136°53'E; 2306 02 266 23x1 16x3 2 x x 4400-3 x x x x. 557

0		26.7	34.29	4.58	8.35	0	26.7	34.29	22.30	555	0.000
10		26.57	34.27	4.64	8.35	10	26.57	34.27	22.33	552	0.055
25		26.00	34.33	4.72	8.35	25	26.00	34.33	22.55	531	0.137
50		22.54	34.70	5.12	8.35	50	22.54	34.70	23.86	406	0.254
106	24	20.95	34.81	4.72	8.30	100	21.08	34.81	24.35	359	0.447
150	24	20.02	34.83	4.55	8.30	150	20.02	34.83	24.65	330	0.621
196	24	19.25	34.81	4.88	8.30	200	19.17	34.81	24.86	310	0.784
287	24	18.27	34.76	4.38	8.25	300	18.10	34.74	25.07	290	1.092
394	28	16.01	34.63	4.30	8.15	400	15.87	34.63	25.51	248	1.372
488	28	14.18	34.52	4.12	8.10	500	13.85	34.51	25.85	216	1.617
583	28	11.46	34.36	3.59	8.00	600	11.08	34.34	26.26	177	1.826
774	28	7.81	34.24	2.86	7.90	800	7.39	34.24	26.79	127	2.154
968	28	4.90	34.27	1.69	7.75	1000		(34.29)			

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⁎°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

MEIYO MARU; July 6, 1955; 2010-2050 GCT; 35°13'N, 140°47'E; 21-17 02 252 21x4 21x4 1 15-x x 300-3 x x x x. B-1

0		24.6	34.43		8.30	0	24.6	34.43	23.06	482	0.000
10	16	24.53	34.43		8.35	10	24.53	34.43	23.08	480	0.048
25	16	23.78	34.65		8.30	25	23.78	34.65	23.47	443	0.117
50	16	22.58	34.76		8.30	50	22.58	34.76	23.89	403	0.223
63	58	21.41	34.67		8.30	100	18.15	34.61	24.80	316	0.413
97	58	18.96	34.61		8.30						
137	58	16.95	34.61		8.25						

MEIYO MARU; July 27, 1955; 2235-2349 GCT; 34°59'N, 140°28'E; 0508 03 251 05x1 23x3 5 15-x 4 x x x x. B-1'

0		25.3	34.15	4.65	8.35	0	25.3	34.15	22.63	523	0.000
10	14	25.11	34.18	4.84	8.35	10	25.11	34.18	22.70	516	0.052
25	14	24.81	34.18	4.82	8.35	25	24.81	34.18	22.80	507	0.129
50	14	23.64	34.31	4.73	8.35	50	23.64	34.31	23.25	464	0.250
90		18.40	34.60	4.20	8.25	100	17.45	34.60	25.13	284	0.438
139		15.09	34.56	3.92	8.15	150	14.43	34.52	25.74	226	0.567
188		12.13	34.43	3.50	8.05	200	11.75	34.42	26.20	183	0.672
285		9.74	34.33	3.27	7.90	300	(9.45)	(34.31)	(26.52)	(152)	(0.815)

MEIYO MARU; July 27, 1955; 1630-1714 GCT; 34°36'N, 140°50'E; 2718 03 266 27x4 27x5 2 x x x x x x. B-2

0		26.4	34.22	4.68	8.40	0	26.4	34.22	22.34	551	0.000
10	10	26.50	34.20	4.49	8.40	10	26.50	34.20	22.29	556	0.055
25	10	26.55	34.22	4.62	8.40	25	26.55	34.22	22.29	556	0.139
50	10	25.71	34.47	4.65	8.40	50	25.71	34.47	22.75	511	0.272
105	40	21.10	34.78	4.40	8.30	100	21.38	34.76	24.24	369	0.494
145	40	18.85	-	4.05	8.25	150	18.76	34.78	24.94	302	0.664
183	40	18.37	34.78	4.33	8.25	200	18.12	34.78	25.10	287	0.814
262	40	15.64	34.76	4.46	8.25	300	14.03	34.63	25.92	209	1.068
328	58	12.92	34.47	3.64	8.10	400	10.94	34.38	26.33	170	1.266
397	58	11.00	34.38	3.37	8.05	500	8.82	34.25	26.58	147	1.433
469	58	9.35	34.27	3.10	7.95	600	7.13	34.25	26.83	123	1.576
612	58	6.96	34.25	2.49	7.85	800	(4.96)				
774	58	5.17	34.29	1.93	7.75						

MEIYO MARU; July 27, 1955; 1120-1151 GCT; 34°19'N, 141°16'E; 2712 02 267 27x5 29x5 2 x x x x x x. B-3

0		26.9	34.47	4.54	8.40	0	26.9	34.47	22.37	548	0.000
10	13	26.99	34.43	4.57	8.40	10	26.99	34.43	22.31	554	0.055
25	13	27.07	34.42	4.51	8.35	25	27.07	34.42	22.28	557	0.138
50	13	26.12	34.49	4.57	8.35	50	26.12	34.49	22.62	524	0.274
95	40	24.33	34.65	4.48	8.35	100	24.11	34.67	23.38	452	0.519
136	40	22.41	34.81	4.47	8.35	150	21.83	34.83	24.16	377	0.728
177	40	20.78	34.85	4.26	8.30	200	19.86	34.81	24.68	328	0.908
259	40	17.78	34.76	4.54	8.20	300	17.04	34.74	25.33	265	1.212
384	50	15.93	34.67	4.46	8.20	400	15.51	34.63	25.59	241	1.476
459	50	13.11	34.49	3.79	8.15	500	11.05	34.36	26.28	175	1.695
532	50	9.55	34.27	3.36	7.90	600	7.81	34.16	26.66	139	1.861
697	50	5.97	34.11	2.85	7.80	800	5.15	34.24	27.08	100	2.118
844	50	5.05	34.31	1.74	7.75						

B-4

MEIYO MARU; July 27, 1955; 0615-0655 GCT; 33°57'N, 141°36'E; 2518 02 273 25x5 27x5 2 29-x 3 x x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.0	34.34	4.53		8.40	0	27.0	34.34	22.25	559	0.000
10	16	26.99	34.33	4.66		8.40	10	26.99	34.33	22.24	560	0.056
25	16	27.01	34.34	4.54		8.40	25	27.01	34.34	22.25	559	0.140
50	16	26.39	34.40	4.63		8.40	50	26.39	34.40	22.48	538	0.277
111	13	20.66	34.70	5.23		8.35	100	21.38	34.65	24.15	378	0.508
160	13	18.86	34.78	4.64		8.25	150	19.20	34.76	24.81	315	0.683
208	13	17.64	34.74	4.75		8.25	200	17.81	34.74	25.14	283	0.835
305	13	16.64	34.70	4.88		8.20	300	16.70	34.70	25.38	261	1.114
411	10	14.95	34.60	4.26		8.15	400	15.15	34.61	25.66	234	1.373
509	10	11.71	34.40	3.56		8.05	500	12.10	34.42	26.14	188	1.595
607	10	8.31	34.16	3.50		7.85	600	8.54	34.18	26.57	148	1.773
805	10	4.34	34.02	2.43		7.70	800	4.40	34.02	26.98	109	2.048
1003	10	3.73	34.24	1.31		7.60	1000	3.73	34.22	27.22	86	2.258

B-5

MEIYO MARU; July 27, 1955; 0100-0135 GCT; 33°38'N, 142°05'E; 2518 02 260 25x4 25x4 2 38-x 1 x x x x x.

0		25.5	34.47	4.69		8.25	0	25.5	34.47	22.82	505	0.000
10	10	25.40	34.43	4.65		8.40	10	25.40	34.43	22.82	505	0.050
25	10	25.39	34.43	4.72		8.40	25	25.39	34.43	22.82	505	0.126
50	10	22.42	34.67	4.67		8.25	50	22.42	34.67	23.88	404	0.240
112	19	20.42	34.79	4.48		8.25	100	20.70	34.79	24.44	350	0.430
161	19	19.51	34.79	4.53		8.25	150	19.73	34.79	24.69	327	0.601
209	19	18.55	34.76	4.69		8.25	200	18.79	34.78	24.93	303	0.762
307	19	16.84	34.70	5.02		8.25	300	16.95	34.70	25.32	266	1.054
431	22	14.99	34.58	4.07		8.10	400	15.60	34.61	25.56	244	1.320
538	22	11.83	34.40	3.85		8.05	500	13.10	34.47	25.98	204	1.555
635	22	9.37	34.25	3.39		7.95	600	10.20	34.31	26.40	164	1.750
830	22	4.56	34.00	2.95		7.75	800	5.00	34.04	26.94	112	2.046
1024	22	3.78	34.22	1.29		7.65	1000	3.89	34.18	27.17	91	2.266

B-6

MEIYO MARU; July 26, 1955; 1845-1920 GCT; 33°18'N, 142°30'E; 2316 02 256 23x4 23x4 2 x x x x x x x.

0		25.7	34.45	4.69		8.40	0	25.7	34.45	22.74	512	0.000
10	8	25.76	34.54	4.66		8.40	10	25.76	34.54	22.79	508	0.051
25	8	25.63	34.49	4.70		8.40	25	25.63	34.49	22.79	508	0.127
50	8	22.88	34.74	4.79		8.35	50	22.88	34.74	23.80	411	0.242
98	40	20.56	34.87	4.40		8.30	100	20.50	34.87	24.55	340	0.431
141	40	19.47	34.85	4.68		8.30	150	19.36	34.85	24.84	312	0.596
188	40	18.96	34.85	4.62		8.30	200	18.79	34.85	24.98	299	0.752
284	40	17.11	34.76	4.91		8.25	300	16.95	34.74	25.34	264	1.041
423	43	15.42	34.65	4.33		8.15	400	15.78	34.67	25.57	243	1.306
513	43	12.78	34.47	3.98		8.10	500	13.30	34.51	25.97	205	1.542
604	43	10.16	34.31	3.76		8.05	600	10.23	34.31	26.39	165	1.738
786	43	5.84	34.15	2.96		7.80	800	5.62	34.15	26.95	111	2.035
966	43	4.00	34.20	1.76		7.70	1000	(3.85)	(34.22)	(27.20)	(87)	(2.251)

B-7

MEIYO MARU; July 26, 1955; 1245-1339 GCT; 32°57'N, 142°54'E; 2310 02 254 23x5 23x5 2 x x x x x x x.

0		25.4	34.52	4.70		8.40	0	25.4	34.52	22.89	498	0.000
10	7	25.39	34.51	4.73		8.40	10	25.39	34.51	22.88	499	0.050
25	7	25.16	34.52	4.74		8.40	25	25.16	34.52	22.96	492	0.124
50	7	22.50	34.65	4.91		8.40	50	22.50	34.65	23.84	407	0.237
109	28	19.73	34.81	4.66		8.35	100	20.06	34.79	24.61	334	0.423
155	28	18.35	34.81	4.77		8.35	150	18.45	34.81	25.04	293	0.582
202	28	17.60	34.76	4.90		8.30	200	17.62	34.76	25.20	278	0.727
297	28	16.75	34.72	4.98		8.25	300	16.72	34.72	25.38	261	1.004
434	20	14.92	34.61	4.23		8.20	400	15.50	34.65	25.61	239	1.265
532	20	11.85	34.49	3.94		8.15	500	12.94	34.54	26.07	195	1.494
630	20	9.42	34.33	3.25		8.05	600	10.12	34.38	26.47	157	1.681
825	20	6.24	34.22	2.59		7.85	800	6.62	34.22	26.88	118	1.978
1018	20	3.94	34.22	1.96		7.70	1000	4.15	34.22	27.18	90	2.205

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2		pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L			m	°C	‰	g/L	10^{-5} cm³/g	dyn. m

MEIYO MARU; July 26, 1955; 0620-0702 GCT; 32°38'N, 143°35'E; 2318 02 263 23x7 25x5 2 34-x 1 x x x x x. B-8

0		26.6	34.52	4.55	8.35	0	26.6	34.52	22.54	532	0.000
10	9	26.55	34.49	4.55	8.35	10	26.55	34.49	22.50	536	0.053
25	9	26.03	34.54	4.38	8.35	25	26.03	34.54	22.70	516	0.132
50	9	21.99	34.67	5.05	8.35	50	21.99	34.67	23.99	393	0.246
103	6	18.51	34.79	4.72	8.30	100	19.50	34.79	24.75	321	0.426
153	6	18.51	34.78	4.52	8.30	150	18.58	34.78	24.99	298	0.582
202	6	17.33	34.74	4.73	8.30	200	17.39	34.74	25.24	274	0.728
302	6	16.67	34.70	4.82	8.25	300	16.68	34.70	25.38	261	1.004
412	8	14.73	34.67	4.24	8.20	400	15.00	34.67	25.73	227	1.260
510	8	12.57	34.54	3.83	8.10	500	12.85	34.47	26.03	199	1.484
610	8	9.79	34.31	3.48	7.95	600	10.05	34.33	26.44	160	1.675
809	8	4.74	34.05	2.69	7.80	800	4.90	34.05	26.96	111	1.966
1007	8	3.84	34.22	1.39	7.60	1000	3.85	34.22	27.20	88	2.182

MEIYO MARU; July 25, 1955; 2220-2251 GCT; 33°00'N, 144°08'E; 2318 02 260 23x7 23x6 2 35 x 1 x x x x. B-9

0		26.2	34.52	4.57	8.40	0	26.2	34.52	22.63	523	0.000
10	10	26.28	34.51	4.58	8.40	10	26.28	34.51	22.60	526	0.052
25	10	26.29	34.52	4.55	8.40	25	26.29	34.52	22.60	526	0.131
50	10	21.25	34.60	5.32	8.40	50	21.25	34.60	24.14	379	0.245
100	3	19.31	34.74	4.74	8.30	100	19.31	34.74	24.77	319	0.420
149	3	18.19	34.74	4.56	8.25	150	18.19	34.74	25.05	292	0.575
199	3	17.45	34.74	-	8.25	200	17.45	34.74	25.23	275	0.719
299	3	16.37	34.69	4.65	8.20	300	16.35	34.69	25.45	254	0.991
406	16	14.21	34.56	4.26	8.15	400	14.40	34.58	25.79	222	1.239
502	16	11.23	34.40	3.87	8.05	500	11.34	34.40	26.26	177	1.449
597	16	7.34	34.07	3.65	7.95	600	7.30	34.07	26.67	138	1.616
785	16	4.87	34.09	2.36	7.75	800	4.75	34.09	27.01	106	1.877
972	16	3.75	34.24	1.29	7.70	1000	(3.69)	(34.27)	(27.26)	(83)	(2.082)

MEIYO MARU; July 25, 1955; 0820-0952 GCT; 34°00'N, 143°55'E; 2319 02 252 23x8 23x8 2 20-x 1 x x x x x. B-10

0		24.5	34.34	4.86	8.40	0	24.5	34.34	23.02	486	0.000
10		24.54	34.31	4.87	8.40	10	24.54	34.31	22.99	489	0.049
25		24.57	34.33	5.07	8.40	25	24.57	34.33	22.99	489	0.122
50		22.18	34.18	5.25	8.35	50	22.18	34.18	23.58	432	0.237
115		11.85	34.29	4.92	8.25	100	13.25	34.27	25.79	222	0.402
165		8.72	34.09	4.85	8.15	150	9.70	34.16	26.37	167	0.501
215		6.49	33.89	5.15	8.05	200	7.10	33.95	26.61	144	0.580
315		5.16	33.89	4.02	7.90	300	5.25	33.86	26.77	129	0.719
413		4.61	33.96	3.10	7.80	400	4.68	33.95	26.92	114	0.845
497		3.96	34.04	2.27	7.70	500	3.95	34.04	27.05	102	0.957
632		3.77	34.16	1.45	7.70	600	3.80	34.13	27.13	95	1.059
827		3.36	34.29	1.11	7.65	800	3.40	34.27	27.28	81	1.245
1015		2.95	34.40	0.99	7.65	1000	3.00	34.40	27.43	66	1.403

MEIYO MARU; July 7, 1955; 2225-2336 GCT; 35°00'N, 143°46'E; 2323 02 253 23x2 23x4 2 30-x 2 5625-3 x x x x. B-11

0		23.8	34.69	4.86	8.35	0	23.8	34.69	23.48	442	0.000
10		23.74	34.63	4.86	8.30	10	23.74	34.63	23.47	443	0.044
25		23.63	34.63	4.84	8.40	25	23.63	34.63	23.50	440	0.110
50		21.14	34.72	5.03	8.30	50	21.14	34.72	24.26	368	0.212
107	13	19.25	34.83	4.76	8.30	100	19.46	34.81	24.78	318	0.384
155	13	18.24	34.78	4.82	8.35	150	18.32	34.78	25.04	293	0.539
203	13	17.45	34.78	4.71	8.30	200	17.46	34.78	25.26	272	0.683
323	18	16.74	34.72	5.11	8.30	300	16.85	34.74	25.37	262	0.957
421	18	15.57	34.65	4.41	8.20	400	15.90	34.67	25.53	246	1.221
519	18	13.53	34.52	4.05	8.15	500	14.05	34.56	25.85	216	1.464
610	41	11.11	34.36	3.79	8.05	600	11.40	34.38	26.23	180	1.674
808	41	6.50	34.13	2.94	7.85	800	6.64	34.13	26.80	126	2.003
1007	41	4.08	34.15	1.71	7.70	1000	4.10	34.15	27.12	96	2.244
1205	41	3.64	34.33	1.18	7.75	1200	3.65	34.33	27.32	77	2.437
1503	41	2.80	34.45	0.85	7.75	1500	2.81	34.45	27.48	62	2.669

B-11'

MEIYO MARU; July 24, 1955; 0900-1015 GCT; 35°15'N, 143°38'E; 2319 03 262 23x8 20x8 1 x 1 x x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		25.8	34.45			8.40	0	25.8	34.45	22.71	515	0.000
20	45	25.83	34.49			8.40	10	25.83	34.47	22.72	514	0.051
35	45	25.78	34.47			8.40	25	25.78	34.49	22.75	511	0.128
54	45	23.81	34.58			8.40	50	24.25	34.54	23.25	464	0.250
90	45	21.56	34.81			8.35	100	21.06	34.83	24.37	357	0.457
131	45	19.76	34.76			8.35	150	19.30	34.78	24.80	316	0.627
181	52	18.63	34.79			8.25	200	18.32	34.79	25.06	291	0.782
249	52	17.62	34.74			8.25	300	17.05	34.72	25.32	266	1.067
325	52	16.85	34.70			8.20	400	16.02	34.65	25.49	250	1.336
338	68	16.80	34.72			8.20	500	13.74	34.52	25.88	213	1.580
405	52	15.97	34.65			8.30	600	10.30	34.31	26.38	166	1.782
472	68	14.58	34.58			8.25	800	5.20	34.04	26.92	114	2.082
631	68	8.95	34.22			8.30	1000	3.85	34.18	27.17	91	2.303
804	68	5.17	34.04			7.90						
1071	68	3.67	34.25			7.70						

B-12

MEIYO MARU; July 8, 1955; 1025-1100 GCT; 35°23'N, 144°00'E; 2510 01 242 25x2 27x3 2 x x x x x x x.

0		24.5	34.58			8.40	0	24.5	34.58	23.20	469	0.000
10		24.51	34.54			8.40	10	24.51	34.54	23.17	472	0.047
25		23.97	34.60			8.35	25	23.97	34.60	23.37	453	0.116
50		23.42	34.67			8.40	50	23.42	34.67	23.58	432	0.227
103	7	19.53	34.78			8.35	100	19.70	34.78	24.70	326	0.418
153	7	18.27	34.76			8.35	150	18.30	34.76	25.04	293	0.574
202	7	17.59	34.72			8.35	200	17.64	34.72	25.17	281	0.721
300	7	16.75	34.70			8.35	300	16.75	34.70	25.37	262	0.999
422	9	15.67	34.61			8.25	400	15.86	34.63	25.51	248	1.265
521	9	13.80	34.49			8.25	500	14.28	34.52	25.78	223	1.513
620	9	11.13	34.36			8.00	600	11.75	34.40	26.19	184	1.730
817	9	6.06	34.05			7.90	800	6.45	34.07	26.78	128	2.066
1015	9	4.28	34.18			7.70	1000	4.29	34.16	27.11	97	2.311

B-13

MEIYO MARU; July 8, 1955; 1500-1600 GCT; 35°45'N, 143°55'E; 1206 01 244 12x1 25x3 2 x x 5780-3 x x x x.

0		25.1	34.45	4.69		8.40	0	25.1	34.45	22.92	495	0.000
10		25.06	34.43	4.65		8.40	10	25.06	34.43	22.92	495	0.049
25		22.44	34.61	4.78		8.40	25	22.44	34.61	23.82	409	0.117
50	7	20.75	34.67	5.04		8.40	50	20.75	34.67	24.33	361	0.214
103	7	19.06	34.78	4.65		8.35	100	19.15	34.78	24.84	312	0.383
153	7	18.17	34.76	4.80		8.30	150	18.20	34.76	25.07	290	0.535
202	7	17.71	34.74	4.90		8.30	200	17.79	34.74	25.15	282	0.681
308	20	16.87	34.70	4.37		8.30	300	16.94	34.70	25.31	267	0.963
405	20	16.24	34.67	4.59		8.25	400	16.30	34.67	25.44	255	1.235
501	20	14.53	34.54	4.14		8.20	500	14.58	34.54	25.73	227	1.489
623	16	11.69	34.42	3.66		8.05	600	12.25	34.45	26.13	189	1.710
820	16	6.37	34.05	3.31		7.95	800	6.82	34.07	26.73	132	2.056
1012	16	4.38	34.11	1.79		7.75	1000	4.44	34.09	27.04	103	2.312
1173	27	3.41	34.29	1.09		7.70	1200	3.38	34.31	27.32	77	2.513
1470	27	2.91	34.51	3.78		8.25	1500	(2.89)	(34.52)	(27.53)	(57)	(2.739)

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ✕°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m

MEIYO MARU; July 18, 1955; 0940-1030 GCT; 35°59'N, 144°00'E; 1212 02 265 12x4 14x8 2 x 1 B-13'
5720-3 x x x x.

0		26.5	34.56		8.40	0	26.5	34.56	22.57	529	0.000
10	0	26.60	34.51		8.40	10	26.60	34.51	22.50	536	0.053
25	0	25.00	34.56		8.40	25	25.00	34.56	23.03	485	0.130
50	0	22.40	34.61		8.40	50	22.40	34.61	23.84	407	0.242
100	0	19.78	34.79		8.35	100	19.78	34.79	24.68	328	0.426
154	15	18.46	34.81		8.30	150	19.52	34.81	24.76	320	0.590
202	15	17.94	34.76		8.30	200	17.95	34.76	25.12	285	0.744
299	15	17.07	34.74		8.25	300	17.05	34.74	25.33	265	1.026
396	15	16.42	34.70		8.20	400	16.39	34.70	25.45	254	1.297
531	17	14.06	34.56		8.20	500	14.82	34.60	25.72	228	1.551
628	17	11.73	34.42		8.15	600	12.48	34.47	26.11	191	1.774
823	17	6.68	34.13		7.95	800	7.21	34.16	26.75	130	2.121
1018	17	4.32	34.18		7.75	1000	4.52	34.16	27.08	100	2.372
1211	17	3.60	34.31		7.75	1200	3.64	34.29	27.28	81	2.575
1502	17	2.84	34.47		7.75	1500	2.84	34.47	27.50	60	2.813

MEIYO MARU; July 8, 1955; 2220-2300 GCT; 36°30'N, 143°58'E; 1110 01 253 11x1 27x3 2 40-0 1 B-14
5400-3 x x x x.

0		25.6	34.09		8.40	0	25.6	34.09	22.49	537	0.000
10		25.69	34.34		8.40	10	25.69	34.34	22.66	520	0.053
25		25.74	34.43		8.40	25	25.74	34.43	22.71	515	0.130
50		25.23	34.45		8.40	50	25.23	34.45	22.87	500	0.258
102	12	23.47	34.69		8.40	100	23.47	34.69	23.59	431	0.492
151	12	21.79	34.72		8.35	150	21.82	34.72	24.08	385	0.698
200	12	20.11	34.76		8.35	200	20.11	34.76	24.57	338	0.882
297	12	17.54	34.74		8.25	300	17.50	34.74	25.22	276	1.197
412	32	15.93	34.63		8.25	400	16.15	34.65	25.47	252	1.472
506	32	13.52	34.49		8.10	500	13.74	34.51	25.87	214	1.718
600	32	11.02	34.36		8.05	600	11.02	34.36	26.29	174	1.924
791	32	5.83	34.02		7.85	800	5.70	34.02	26.84	122	2.242
985	32	4.15	34.11		7.75	1000	(4.09)	(34.13)	(27.11)	(97)	(2.479)

MEIYO MARU; July 9, 1955; 0245-0327 GCT; 37°00'N, 144°00'E; 1408 02 264 14x2 23x2 2 29-x 1 B-15
6025-3 x x x.

0		26.1		4.72	8.40	0	26.1	(34.40)	22.57	529	0.000
10	8	25.61	34.40	4.87	8.40	10	25.61	34.40	22.73	513	0.052
25	8	25.47	34.42	4.66	8.40	25	25.47	34.42	22.79	508	0.129
50	8	25.01	34.43	4.71	8.40	50	25.01	34.43	22.93	494	0.254
98	17	22.99	34.65	4.68	8.40	100	22.95	34.65	23.70	421	0.484
146	17	20.62	34.74	4.93	8.30	150	20.52	34.74	24.44	350	0.679
190	17	19.12	34.78	4.50	8.30	200	18.89	34.78	24.90	306	0.846
305	10	16.93	34.72	4.79	8.30	300	17.00	34.72	25.32	266	1.140
406	10	15.06	34.61	4.11	8.25	400	15.18	34.63	25.67	233	1.400
504	10	12.01	34.47	3.55	8.05	500	12.15	34.47	26.17	186	1.621
638	14	9.46	34.29	2.98	7.95	600	10.05	34.34	26.44	160	1.804
826	14	5.33	34.11	2.40	7.85	800	5.84	34.13	26.91	115	2.100
1013	14	4.11	34.20	1.49	7.75	1000	4.19	34.18	27.13	95	2.328
1203	14	3.37	34.29	1.23	7.60	1200	3.40	34.29	27.30	79	2.522
1501	14	2.57	34.47	1.07	7.55	1500	2.57	34.47	27.52	58	2.751

B-15'

MEIYO MARU; July 16, 1955; 1945-2025 GCT; 37°00'N, 144°00'E; 1410 02 256 14x2 14x3 2 31-x 1 x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m
0		26.3	34.60	4.64		8.40	0	26.3	34.60	22.66	520	0.000
10	5	26.42	34.54	4.62		8.40	10	26.42	34.54	22.58	528	0.052
25	5	24.19	34.60	4.91		8.40	25	24.19	34.60	23.31	458	0.126
49	5	22.20	34.65	5.02		8.40	50	22.10	34.65	23.95	397	0.233
102	9	19.66	34.78	4.86		8.30	100	19.70	34.78	24.70	326	0.415
150	9	18.61	-	4.62		8.25	150	18.61	34.79	24.98	299	0.573
199	9	17.72	34.78	4.33		8.20	200	17.72	34.78	25.19	279	0.721
305	18	16.68	34.72	3.96		8.30	300	16.71	34.74	25.40	259	0.997
401	18	15.41	34.67	4.27		8.20	400	15.45	34.67	25.64	236	1.255
496	18	13.17	34.52	3.96		8.15	500	13.10	34.51	26.02	200	1.485
621	22	9.98	34.33	3.66		8.05	600	10.53	34.36	26.38	166	1.680
818	22	5.37	34.09	2.92		7.80	800	5.68	34.11	26.92	114	1.982
1013	22	4.01	34.22	1.55		7.75	1000	4.06	34.20	27.17	91	2.205
1209	22	3.34	34.36	1.23		7.70	1200	3.39	34.36	27.37	72	2.388
1500	22	2.74	34.47	1.89		7.75	1500	2.74	34.47	27.51	59	2.610

B-16

MEIYO MARU; July 9, 1955; 0845-0915 GCT; 37°31'N, 144°05'E; 1408 02 257 14x2 25x2 2 12-0 2 6380-3 x x x.

0		25.4	34.38	4.85		8.40	0	25.4	34.38	22.78	500	0.000
10	6	24.14	34.38	5.09		8.40	10	24.14	34.38	23.16	473	0.049
25	6	22.74	34.70	4.97		8.40	25	22.74	34.70	23.81	410	0.115
50	6	22.01	34.72	4.55		8.40	50	22.01	34.72	24.02	390	0.215
101	15	20.14	34.79	4.21		8.30	100	20.20	34.79	24.57	338	0.398
149	15	17.39	34.67	4.08		8.25	150	17.39	34.67	25.19	279	0.554
197	15	15.56	34.65	4.22		8.25	200	15.50	34.65	25.61	239	0.687
294	15	12.21	34.43	3.71		8.10	300	12.05	34.42	26.15	187	0.906
361	35	10.10	34.33	3.25		8.05	400	8.50	34.31	26.68	137	1.076
434	35	-	34.29	2.90		7.95	500	1.59	33.48	26.81	125	1.210
509	35	1.38	33.44	-		7.85	600	1.98	33.68	26.94	112	1.329
643	35	2.49	33.80	2.90		7.75	800	2.90	34.00	27.12	96	1.544
838	35	2.91	34.04	1.45		7.65						

B-17

MEIYO MARU; July 9, 1955; 1520-1610 GCT; 38°10'N, 143°59'E; 1106 02 222 11x1 xxxx 2 x x 5500-3 x x x x.

0		17.7	32.83	5.94		8.35	0	17.7	32.83	23.71	420	0.000
10	4	14.75	32.81	6.65		8.35	10	14.75	32.81	24.36	358	0.039
25	4	12.97	32.88	7.06		8.35	25	12.97	32.88	24.78	318	0.090
50	4	5.45	33.12	7.41		8.25	50	5.45	33.12	26.16	187	0.153
105	0	1.71	33.30	7.09		8.05	100	1.90	33.30	26.68	137	0.234
155	0	1.38	33.33	6.73		7.95	150	1.40	33.33	26.70	135	0.302
205	0	1.47	33.40	6.26		7.95	200	1.42	33.39	26.74	131	0.369
300	7	2.69	33.73	3.83		7.75	300	2.69	33.73	26.93	113	0.491
399	7	2.77	33.87	2.52		7.75	400	2.77	33.87	27.03	104	0.602
498	7	2.85	34.00	1.76		7.75	500	2.85	34.00	27.12	96	0.704
618	26	2.92	34.13	1.14		7.75	600	2.91	34.11	27.20	88	0.799
807	26	2.90	34.27	0.94		7.75	800	2.90	34.27	27.33	76	0.971
998	26	2.75	34.40	0.89		7.75	1000	2.73	34.40	27.45	64	1.120
1191	26	2.55	34.92	1.09		7.75	1200	2.54	34.47	27.52	58	1.254
1482	26	2.25	34.56	1.26		7.75	1500	(2.21)	(34.56)	(27.63)	(47)	(1.427)

OBSERVED							INTERPOLATED			COMPUTED			
Z m	W ±°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	

MEIYO MARU; July 6-7, 1955; 2305-0045 GCT; 35°16'N, 141°16'E; 23-28 02 265 23x4 23x6 2 x 3 C-1
2300-3 x x x.

0		24.9	34.43	4.80	8.30	0	24.9	34.43	22.97	491	0.000
10	13	24.89	34.43	4.75	8.30	10	24.89	34.43	22.97	491	0.049
25	13	24.91	34.43	4.80	8.30	25	24.91	34.43	22.96	492	0.123
50	13	23.72	34.70	4.73	8.35	50	23.72	34.70	23.52	438	0.239
84	50	22.19	-	-	8.30	100	21.86	34.65	24.02	390	0.448
100	0	21.86	34.65	4.61	8.30	150	19.74	34.83	24.73	323	0.628
150	0	19.74	34.83	-	8.30	200	17.46	34.78	25.26	272	0.780
200	0	17.46	34.78	4.27	8.20	300	14.16	34.65	25.90	211	1.028
300	0	14.16	34.65	4.00	8.10	400	11.68	34.43	26.23	180	1.232
343	23	13.16	34.52	3.78	8.10	500	9.00	34.45	26.71	134	1.398
408	23	11.16	34.43	3.53	8.00	600	6.33	34.42	27.07	101	1.523
463		10.00	34.45	3.47	8.10	800	3.90	34.33	27.28	81	1.719
645		-	-	4.24	8.20						
829		3.81	34.31	1.95	7.70						

MEIYO MARU; July 7, 1955; 0555-0635 GCT; 35°10'N, 141°58'E; 23-18 03 274 23x4 23x7 2 26-x 2 C-2
5700-3 x x x x.

0		25.8	34.49	4.76	8.40	0	25.8	34.49	22.74	512	0.000
10	20	25.90	34.45	4.71	8.30	10	25.90	34.45	22.67	519	0.052
25	20	25.92	34.45	4.51	8.30	25	25.92	34.45	22.67	519	0.129
49	20	25.79	34.45	4.75	8.30	50	25.79	34.45	22.71	515	0.259
104	30	21.07	34.70	5.07	8.30	100	21.21	34.69	24.23	370	0.481
148	30	19.25	34.72	4.30	8.25	150	19.24	34.72	24.76	320	0.656
193	30	18.51	34.78	4.96	8.30	200	18.42	34.78	25.03	294	0.812
285	30	16.84	34.72	5.00	8.20	300	16.64	34.72	25.40	259	1.096
431	33	15.10	34.61	3.96	8.15	400	15.49	34.65	25.61	239	1.356
521	33	11.41	34.40	4.10	8.00	500	12.55	34.43	26.05	197	1.585
611	33	8.81	34.36	3.21	7.90	600	9.19	34.36	26.61	144	1.766
792	33	5.00	34.11	2.33	7.70	800	4.94	34.11	27.00	107	2.036
978	33	3.84	34.25	1.23	7.60	1000	(3.79)				

MEIYO MARU; July 7, 1955; 0920-1040 GCT; 35°04'N, 142°20'E; 2117 03 264 23x6 23x7 2 25-x 2 C-3
6650-3 x x x.

0		25.5	34.42	4.77	8.30	0	25.5	34.42	22.77	510	0.000
10	0	25.60	34.47	4.75	8.30	10	25.60	34.47	22.79	508	0.051
25	0	25.54	34.42	4.85	8.40	25	25.54	34.42	22.76	511	0.127
50	0	25.35	34.58	5.07	8.30	50	22.35	34.58	23.83	408	0.242
100	0	19.92	34.81	5.15	8.30	100	19.92	34.81	24.66	329	0.429
150	0	18.51	34.79	4.69	8.25	150	18.51	34.79	25.00	297	0.587
200	0	-	-	4.90	8.30	200	17.80	34.78	25.17	281	0.734
203	3	17.78	34.78	4.84	8.30	300	16.76	34.72	25.38	261	1.013
302	3	16.74	34.72	4.65	8.30	400	15.29	34.63	25.65	235	1.272
403	3	15.22	34.63	4.22	8.20	500	12.80	34.45	26.02	200	1.502
499	3	12.82	34.45	3.95	8.00	600	9.76	34.31	26.47	157	1.692
600	3	9.76	-	3.96	8.00	800	5.21	34.13	26.98	109	1.979
805	3	5.10	34.13	2.95	7.90	1000	3.95	34.25	27.22	86	2.191
1001	3	3.99	34.25	1.43	7.70						

MEIYO MARU; July 7, 1955; 1545-1703 GCT; 35°06'N, 143°01'E; 2316 01 251 23x2 23x6 2 x x C-4
5660-3 x x x.

0		24.5	34.61	4.77	8.40	0	24.5	34.61	23.23	466	0.000
10	13	24.53	-	4.79	8.40	10	24.53	34.61	23.22	467	0.047
25	13	23.66	34.61	4.91	8.30	25	23.66	34.61	23.44	442	0.115
50	13	21.71	34.63	5.14	8.20	50	21.71	34.63	24.08	388	0.219
107	35	19.52	34.74	4.45	8.30	100	19.74	34.74	24.65	330	0.399
149	35	18.61	34.78	4.75	8.30	150	18.60	34.78	24.98	299	0.558
187	35	17.90	34.78	4.90	8.30	200	17.70	34.78	25.20	278	0.706
279	35	16.95	34.78	4.91	8.30	300	16.79	34.78	25.42	257	0.980
365	44	16.49	34.74	4.84	8.30	400	16.10	34.70	25.52	247	1.243
456	44	15.23	34.63	4.33	8.20	500	14.06	34.56	25.85	216	1.487
550	44	12.69	34.42	3.92	8.20	600	11.45	34.43	26.27	176	1.695
759	49	8.05	34.20	3.00	8.00	800	7.36	34.25	26.80	126	2.021
954	49	5.17	34.19	2.09	7.90	1000	(4.75)				

C-5

MEIYO MARU; July 8, 1955; 0450-0530 GCT; 34°57'N, 144°26'E; 2315 21 257 23x3 25x3 2 25-x 2 5695-3 x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		25.0	34.54	4.44		8.35	0	25.0	34.54	23.02	486	0.000
10	12	24.98	34.54	4.80		8.40	10	24.98	34.54	23.02	486	0.049
25	12	24.10	34.54	4.82		8.35	25	24.10	34.54	23.29	460	0.118
50	12	22.03	34.60	5.11		8.35	50	22.03	34.60	23.93	399	0.227
110	28	18.86	34.70	4.46		8.25	100	19.25	34.69	24.75	321	0.408
155	28	17.89	34.72	4.80		8.30	150	18.00	34.72	25.07	290	0.563
202	28	16.98	34.70	4.70		8.25	200	17.02	34.70	25.30	268	0.705
297	28	15.98	34.61	4.37		8.20	300	15.95	34.61	25.48	251	0.972
457	25	12.12	34.43	3.87		8.10	400	13.68	34.51	25.89	212	1.214
555	25	8.89	34.20	3.83		7.95	500	10.70	34.34	26.34	169	1.415
652	25	6.25	34.04	3.34		7.85	600	7.56	34.11	26.66	139	1.578
846	25	4.18	34.13	1.80		7.75	800	4.50	34.07	27.02	105	1.839
1045	25	3.41	34.29	1.08		7.75	1000	3.51	34.25	27.26	83	2.042

C-51

MEIYO MARU; July 15, 1955; 2230-2303 GCT; 37°02'N, 141°16'E; 1604 02 228 16x1 11x2 2 14-x 6 140-3 x x x x.

0		21.0	32.79	5.42		8.35	0	21.0	32.79	22.84	503	0.000
10	4	19.27	32.92	5.85		8.30	10	19.27	32.92	23.40	450	0.048
25	4	13.76	33.42	6.40		8.30	25	13.76	33.42	25.04	293	0.103
50	4	10.67	33.73	6.16		8.25	50	10.67	33.73	25.87	214	0.167
99	4	9.91	33.93	5.61		8.25	100	(9.91)	(33.93)	(26.15)	(187)	(0.268)

C-52

MEIYO MARU; July 16, 1955; 0315-0350 GCT; 37°00'N, 141°50'E; 1604 02 267 16x2 14x2 2 18-x 4 725-3 x x x x.

0		24.6	34.22	5.06		8.35	0	24.6	34.22	22.90	497	0.000
10		19.67	34.15	5.89		8.40	10	19.67	34.15	24.23	370	0.043
25		16.53	34.49	4.68		8.25	25	16.53	34.49	25.25	273	0.092
50	3	14.89	34.47	4.23		8.20	50	14.89	34.47	25.61	239	0.156
100	3	11.59	34.42	3.61		8.10	100	11.59	34.42	26.23	180	0.261
148	7	9.40	34.09	3.85		8.05	150	9.35	34.09	26.68	137	0.342
202	6	7.74	34.22	3.28		7.90	200	7.78	34.22	26.72	133	0.411
301	6	6.41	34.24	2.41		7.80	300	6.44	34.24	26.92	114	0.538
400	6	2.67	34.89	2.28		7.75	400	2.67	34.89	27.06	102	0.650
500	6	2.96	34.05	1.40		7.60	500	2.96	34.05	27.15	93	0.749
599	6	2.92	34.20	1.06		7.60	600	(2.92)	(34.20)	(27.28)	(81)	(0.839)

C-53

MEIYO MARU; July 16, 1955; 0700-0750 GCT; 37°01'N, 142°19'E; 1606 03 276 16x2 14x2 2 18-x x 2240-3 x x x x.

0		24.2	34.18	5.61		8.40	0	24.2	34.18	22.99	489	0.000
10	0	20.45	34.38	5.65		8.40	10	20.45	34.38	24.19	374	0.043
25	0	17.06	34.47	4.51		8.30	25	17.06	34.47	25.12	285	0.093
50	0	15.29	34.49	4.18		8.15	50	15.29	34.49	25.54	245	0.159
100	2	9.62	33.80	5.73		8.10	100	9.62	33.80	26.10	171	0.269
150	2	9.51	34.13	4.71		8.10	150	9.51	34.13	26.37	167	0.360
200	2	7.90	34.13	3.99		7.95	200	7.90	34.13	26.63	142	0.439
300	2	6.47	34.25	2.54		7.85	300	6.47	34.25	26.93	113	0.570
396	15	5.11	34.29	2.01		7.75	400	5.10	34.29	27.12	96	0.680
491	15	4.55	34.31	1.77		7.75	500	4.50	34.31	27.21	87	0.775
586	15	4.03	34.33	1.54		7.70	600	3.99	34.33	27.28	81	0.863
775	15	3.44	34.38	1.42		7.70	800	3.40	34.38	27.38	71	1.025
962	15	2.90	34.45	1.29		7.65						

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2		pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L			m	°C	‰	g/L	$10^5 cm^3/g$	dyn. m

MEIYO MARU; July 16, 1955; 1110-1145 GCT; 37°00'N, 143°11'E; 1610 02 267 16x2 14x2 2 x x C-54
6100-3 x x x x.

0		27.2	34.31	4.72	8.40	0	27.2	34.31	22.16	568	0.000
10	0	27.26	34.27	4.64	8.40	10	27.26	34.27	22.10	574	0.057
25	0	25.24	34.27	5.77	8.40	25	25.24	34.27	22.74	512	0.138
50	0	23.80	34.69	4.79	8.35	50	23.80	34.69	23.11	477	0.263
104	7	20.45	34.81	4.61	8.30	100	20.65	34.81	24.47	348	0.470
153	7	18.80	34.79	4.57	8.30	150	18.92	34.79	24.89	307	0.636
202	7	17.37	34.76	4.94	8.25	200	17.42	34.76	25.25	273	0.784
301	7	16.44	34.72	4.38	8.25	300	16.46	34.72	25.45	254	1.054
388	25	14.40	34.54	4.04	8.20	400	14.00	34.52	25.83	222	1.301
472	25	11.17	34.47	3.59	8.05	500	10.35	34.45	26.48	156	1.498
555	25	8.55	34.40	2.99	7.95	600	7.52	34.34	26.84	122	1.646
711	25	5.47	34.22	2.32	7.80	800	4.45	34.22	27.14	94	1.879
871	25	3.96	34.24	1.47	7.70						

MEIYO MARU; July 17, 1955; 0340-0420 GCT; 37°01'N, 145°01'E; 1414 02 278 14x2 14x4 2 32-x 1 C-55
4900-3 x x x.

0		26.5	34.52	4.63	8.40	0	26.5	34.52	22.54	532	0.000
10	7	26.20	-	4.62	8.40	10	26.20	34.51	22.63	523	0.053
25	7	25.20	34.51	4.73	8.40	25	25.20	34.51	22.94	493	0.129
50	7	23.09	34.69	4.74	8.40	50	23.09	34.69	23.70	421	0.243
110	29	20.70	34.83	4.41	8.30	100	21.02	34.81	24.36	358	0.440
155	29	19.10	-	4.63	8.30	150	19.20	34.83	24.87	309	0.608
200	29	18.04	34.79	4.08	8.30	200	18.04	34.79	25.12	285	0.760
290	29	16.84	34.76	4.73	8.25	300	16.76	34.76	25.41	258	1.038
422	39	15.18	34.65	4.30	8.20	400	15.54	34.67	25.62	238	1.297
518	39	12.86	34.51	3.91	8.10	500	13.30	34.54	25.99	203	1.530
614	39	10.10	-	3.64	8.00	600	10.60	34.36	26.37	167	1.727
806	39	5.63	34.07	3.14	7.80	800	5.76	34.07	26.88	118	2.034
999	39	4.21	-	1.62	7.70	1000	(4.21)				

MEIYO MARU; July 17, 1955; 1040-1150 GCT; 36°59'N, 146°00'E; 1418 03 265 14x2 14x4 2 x x C-56
5415-3 x x x x.

0		26.8	34.38	4.61	8.40	0	26.8	34.38	22.34	551	0.000
10		26.91	34.34	4.67	8.40	10	26.91	34.34	22.26	559	0.055
25		25.59	34.45	4.80	8.35	25	25.59	34.45	22.78	509	0.136
50		24.94	34.52	4.80	8.35	50	24.94	34.52	23.03	485	0.260
109	21	21.16	34.79	4.70	8.35	100	21.85	34.76	24.11	382	0.478
156	21	19.66	34.83	4.65	8.35	150	19.84	34.83	24.69	327	0.658
202	21	18.38	34.81	4.46	8.30	200	18.42	34.81	25.04	293	0.815
338	23	15.25	34.63	4.28	8.25	300	15.25	34.69	25.70	230	1.084
444	17	11.53	34.42	3.48	8.10	400	13.34	34.49	25.90	211	1.314
543	17	8.15	34.27	3.14	8.05	500	9.52	34.33	26.52	152	1.505
641	17	6.56	34.24	2.57	7.90	600	7.18	34.24	26.82	124	1.652
827	23	3.86	34.16	1.90	7.75	800	4.13	34.16	27.13	95	1.886
1035	17	3.42	34.34	1.14	7.70	1000	3.47	34.31	27.32	77	2.072

MEIYO MARU; July 19, 1955; 1335-1403 GCT; 36°00'N, 141°01'E; 0508 02 251 05x1 14x4 2 x x 301
350-3 x x x x.

0		23.4	34.07	5.70	8.40	0	23.4	34.07	23.14	474	0.000
10	15	22.07	33.93	5.47	8.40	10	22.07	33.93	23.41	449	0.046
25	15	16.85	33.87	5.89	8.40	25	16.85	33.87	24.70	421	0.111
50	15	12.92	34.07	5.48	8.30	50	12.92	34.07	25.70	230	0.193
102	11	10.46	33.87	5.52	8.25	100	10.53	33.89	26.02	200	0.301
159	13	9.90	33.89	6.17	8.10	150	9.90	33.87	26.11	191	0.400
208	13	10.07	34.11	4.83	8.05	200	10.06	34.09	26.26	177	0.494
307	13	4.38	33.71	4.99	7.95	300	4.98	33.77	26.73	132	0.652

302

MEIYO MARU; July 19, 1955; 0540-0636 GCT; 36°02'N, 141°53'E; 0914 01 284 09x4 14x6 2 30-x 2 2070-3 x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ✲°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.2	34.31	4.51		8.40	0	27.2	34.31	22.15	569	0.000
10	8	27.16	34.29	4.52		8.40	10	27.16	34.29	22.15	569	0.057
25	8	25.57	34.61	4.71		8.40	25	25.57	34.61	22.90	497	0.137
50	8	23.27	34.65	4.64		8.35	50	23.27	34.65	23.63	427	0.253
88	38	18.05	34.61	4.22		8.25	100	17.45	34.61	25.13	284	0.431
126	38	16.21	34.61	4.04		8.20	150	14.70	34.49	25.66	234	0.563
155	38	14.27	34.47	3.95		8.15	200	11.24	34.34	26.23	180	0.667
206	38	10.63	34.33	3.69		8.00	300	6.93	34.04	26.69	136	0.828
314		6.41	33.98	3.92		7.90	400	4.95	34.96	26.88	118	0.960
362		3.64	33.73	3.82		7.85	500	4.99	34.18	27.05	102	1.074
408		5.28	34.07	2.95		7.80						
494		5.10	34.18	2.37		7.70						
580		3.60	34.15	1.59		7.65						

303

MEIYO MARU; July 18-19, 1955; 2330-0020 GCT; 36°00'N, 142°18'E; 1214 03 269 12x6 14x7 2 30-x 1 5540-3 x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ✲°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		26.8	34.54	4.67		8.40	0	26.8	34.54	22.46	540	0.000
10	6	26.85	34.40	4.62		8.40	10	26.85	34.40	22.34	551	0.055
25	6	26.61	34.42	4.65		8.40	25	26.61	34.42	22.43	542	0.136
50	6	22.88	34.60	4.96		8.40	50	22.88	34.60	23.69	422	0.257
99	6	20.30	34.74	4.92		8.35	100	20.30	34.74	24.50	345	0.450
159	12	18.55	34.74	4.70		8.25	150	18.77	34.74	24.90	306	0.615
209	12	17.36	34.70	4.82		8.25	200	17.48	34.72	25.21	277	0.763
308	12	16.41	34.67	4.61		8.20	300	16.50	34.67	25.40	259	1.038
407	12	14.15	34.52	4.62		8.15	400	14.44	34.54	25.76	225	1.291
485	21	11.11	34.33	3.62		8.05	500	10.64	34.31	26.32	171	1.499
577	21	8.42	34.20	3.20		7.90	600	7.95	34.18	26.66	139	1.664
758	21	5.27	34.16	2.31		7.75	800	4.93	34.20	27.70	101	1.923
935	21	4.18	34.33	1.74		7.70	1000	3.80	34.34	27.31	78	2.119
1110	21	3.12	34.36	1.36		7.70	1200	2.82	34.38	27.43	66	2.280
1372	21	2.63	34.47	1.28		7.65						

303'

MEIYO MARU; July 23, 1955; 1925-2025 GCT; 36°00'N, 142°27'E; 1810 03 264 18x2 20x5 2 24-x 2 x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ✲°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		26.8	34.45	4.55		8.35	0	26.8	34.45	22.39	546	0.000
10	7	26.85	34.43	4.50		8.35	10	26.85	34.43	22.36	549	0.055
25	7	25.87	34.47	4.63		8.35	25	25.87	34.47	22.71	515	0.134
50	7	24.33	34.58	4.81		8.30	50	24.33	34.58	23.25	464	0.257
99	7	20.42	34.74	5.10		8.30	100	20.40	34.74	24.48	347	0.461
157	18	18.87	34.78	4.70		8.30	150	19.05	34.78	24.87	309	0.627
204	18	17.93	34.74	4.64		8.30	200	18.02	34.74	25.08	289	0.779
300	18	16.72	34.70	4.94		8.25	300	16.72	34.70	25.37	262	1.062
396	18	14.79	34.58	4.17		8.20	400	14.70	34.58	25.73	227	1.317
482	47	13.35	34.49	3.97		8.15	500	12.80	34.45	26.02	200	1.542
561	47	10.13	34.34	3.59		8.05	600	9.08	34.27	26.56	149	1.727
718	47	6.19	34.13	3.17		7.95	800	5.46	34.11	26.94	112	2.008
873	47	5.05	-	1.83		7.75	1000	4.15	34.31	27.24	84	2.222
1040	47	3.86	34.34	1.29		7.75	1200	3.02	34.43	27.45	64	2.389
1280	47	2.87	34.45	0.92		7.70						

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L		pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

MEIYO MARU; July 18, 1955; 1625-1702 GCT; 35°59'N, 143°12'E; 0912 02 263 09x4 14x7 2 x x 304
5515-3 x x x.

0		26.1	34.58	4.64	8.40	0	26.1	34.58	22.71	515	0.000
10	16	26.22	34.56	4.65	8.40	10	26.22	34.56	22.65	521	0.052
25	16	26.24	34.56	4.69	8.40	25	26.24	34.56	22.65	521	0.130
49	16	23.23	34.60	5.04	8.40	50	23.22	34.60	23.60	430	0.249
100	16	20.14	34.78	5.04	8.35	100	20.14	34.78	24.58	337	0.442
149	16	18.75	-	4.63	8.35	150	18.74	34.78	24.94	302	0.603
197	16	17.63	34.78	4.82	8.30	200	17.59	34.78	25.23	275	0.751
319	19	16.73	34.76	4.89	8.30	300	16.89	34.76	25.38	261	1.026
414	19	15.67	34.67	4.47	8.25	400	15.84	34.69	25.57	243	1.289
510	19	13.11	34.52	4.05	8.15	500	13.46	34.56	25.98	204	1.525
605	19	10.49	34.36	3.65	8.05	600	10.64	34.38	26.38	166	1.722
799	19	5.25	34.09	3.23	7.80	800	5.21	34.09	26.96	111	2.020
992	19	4.19	34.22	1.69	7.70	1000	(4.16)	(34.24)	(27.18)	(90)	(2.238)

MEIYO MARU; July 18, 1955; 0100-0135 GCT; 36°02'N, 145°00'E; 1212 02 x 12x3 14x6 2 31-x 1 305
5670-3 x x x x.

0		26.5	34.54	4.62	8.40	0	26.5	34.54	22.55	531	0.000
10	9	26.43	34.51	4.61	8.40	10	26.43	34.51	22.57	530	0.053
25	9	26.46	34.52	4.64	8.40	25	26.46	34.52	22.55	531	0.133
50	9	22.16	34.63	5.08	8.40	50	22.16	34.63	23.92	400	0.249
106	15	19.69	34.83	4.84	8.30	100	19.90	34.81	24.66	330	0.433
154	15	18.62	34.79	4.66	8.25	150	18.68	34.79	24.97	300	0.592
202	15	17.81	34.78	4.75	8.25	200	17.82	34.78	25.17	281	0.740
299	15	16.98	34.74	5.80u	8.25	300	16.98	34.74	25.34	264	1.020
433	33	15.82	34.67	4.36	8.20	400	16.20	34.70	25.50	249	1.287
530	33	13.31	34.51	3.71	8.10	500	14.29	34.54	25.97	222	1.535
628	33	10.55	34.38	3.29	7.90	600	11.32	34.42	26.28	175	1.746
821	33	6.09	34.11	3.18	7.85	800	6.55	34.15	26.84	122	2.066
1014	33	4.33	34.16	1.75	7.70	1000	4.42	34.16	27.09	99	2.307

MEIYO MARU; July 17, 1955; 1840-1923 GCT; 35°59'N, 145°50'E; 1416 01 258 14x2 14x5 2 27-x 1 306
5700-3 x x x x.

0		26.5	34.47	4.85	8.40	0	26.5	34.47	22.50	536	0.000
10	0	26.58	34.43	4.66	8.40	10	26.58	34.43	22.44	541	0.054
25	0	26.01	34.40	4.78	8.40	25	26.01	34.40	22.60	526	0.134
50	0	24.94	34.49	4.78	8.40	50	24.94	34.49	23.00	488	0.261
100	2	22.45	34.72	4.43	8.35	100	22.45	34.72	23.90	402	0.485
150	2	20.34	34.81	4.68	8.30	150	20.34	34.81	24.55	340	0.672
200	2	18.62	34.81	4.72	8.25	200	18.62	34.81	25.00	297	0.835
300	2	16.91	34.74	4.41	8.25	300	16.91	34.74	25.35	263	1.122
403	5	15.20	34.67	4.29	8.15	400	15.24	34.67	25.69	231	1.380
502	5	12.22	34.45	3.83	8.05	500	12.35	34.47	26.13	189	1.601
600	5	9.38	34.34	3.09	7.90	600	9.38	34.34	26.56	149	1.780
795	5	2.55	33.68	-	7.75	800	2.48	33.68	26.90	116	2.062
989	5	4.06	34.22	1.68	7.65	1000	(4.16)				

MEIYO MARU; July 15, 1955; 1530-1600 GCT; 37°40'N, 141°38'E; 1610 01 225 16x2 11x1 2 x x 350
280-3 x x x x.

0		21.0	33.01		8.35	0	21.0	33.01	23.00	488	0.000
10	6	15.24	33.48		8.30	10	15.24	33.48	24.77	319	0.040
25	6	13.88	33.64		8.30	25	13.88	33.64	25.19	279	0.085
50	6	12.79	33.80		8.30	50	12.79	33.80	25.53	246	0.151
102	13	9.86	33.75		8.25	100	10.05	33.75	25.99	203	0.263
152	13	7.58	33.71		8.25	150	7.64	33.71	26.33	170	0.358
201	13	6.29	33.66		8.25	200	6.32	33.66	26.47	157	0.441

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2		pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L			m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

351 MEIYO MARU; July 10, 1955; 0830-0900 GCT; 38°10'N, 142°00'E; 2310 45 189 00x0 18x1 1 17-x 5 340-3 x x x x.

0		17.2	33.17	5.90	8.35	0	17.2	33.17	24.09	384	0.000
10	0	13.60	33.26	6.48	8.30	10	13.60	33.26	24.95	301	0.034
25	0	11.38	33.37	6.98	8.30	25	11.38	33.37	25.46	253	0.076
55	4	9.65	33.77	6.26	8.20	50	9.86	33.73	26.00	202	0.133
104	4	4.74	33.55	6.13	8.05	100	4.94	33.57	26.57	148	0.221
154	4	3.12	33.50	6.31	8.00	150	3.20	33.50	26.69	136	0.292
203	4	1.84	33.44	6.28	7.95	200	1.90	33.44	26.75	130	0.359
303	4	2.08	33.66	4.08	7.75	300	2.05	33.66	26.92	114	0.481

352 MEIYO MARU; July 10, 1955; 0400-0455 GCT; 38°11'N, 142°34'E; 1808 46 205 18x1 18x1 1 10-x 4 1210-3 x x x x.

0		18.4	32.65	6.11	8.35	0	18.4	32.65	23.40	450	0.000
10	0	16.00	32.76	6.59	8.35	10	16.00	32.76	24.05	387	0.042
25	0	10.81	32.95	7.53	8.35	25	10.81	32.95	25.23	275	0.091
50	0	3.56	33.17	7.29	8.05	50	3.56	33.17	26.39	165	0.147
100	0	1.80	33.33	7.01	7.95	100	1.80	33.33	26.68	137	0.222
150	0	1.58	33.40	6.47	7.95	150	1.58	33.40	26.74	131	0.289
200	0	1.93	33.53	5.08	7.85	200	1.93	33.53	26.82	124	0.354
300	0	2.12	33.73	3.30	7.75	300	2.12	33.73	26.97	110	0.471
405	0	2.83	33.96	1.86	7.75	400	2.80	33.95	27.08	100	0.578
505	0	3.02	34.11	1.22	7.75	500	3.01	34.11	27.19	89	0.675
605	0	3.03	34.20	0.94	7.75	600	3.00	34.20	27.27	82	0.763
805	0	2.70	34.34	0.90	7.70	800	2.72	34.34	27.41	68	0.921
1005	0	2.58	34.42	0.96	7.65	1000	2.55	34.42	27.48	62	1.060

353 MEIYO MARU; July 9, 1955; 2200-2230 GCT; 38°11'N, 143°15'E; 1106 02 199 11x1 18x1 1 20-x x 2300-3 x x x x.

0		18.0	33.12	5.74	8.35	0	18.0	33.12	23.86	406	0.000
10		14.05	33.21	6.22	8.35	10	14.05	33.21	24.82	314	0.036
25		8.78	33.55	6.85	8.25	25	8.78	33.55	26.04	198	0.074
50		8.17	33.80	6.11	8.20	50	8.17	33.80	26.33	170	0.119
100	0	4.76	33.66	5.55	8.05	100	4.76	33.66	26.67	138	0.194
150	0	1.53	33.39	6.11	7.95	150	1.53	33.39	26.74	131	0.261
200	0	1.85	33.53	4.60	7.80	200	1.85	33.53	26.83	123	0.326
300	0	2.31	33.73	3.22	7.75	300	2.31	33.73	26.95	111	0.444
405	6	2.73	33.89	2.16	7.65	400	2.71	33.89	27.05	102	0.553
505	6	2.95	34.05	1.36	7.65	500	2.94	34.04	27.15	93	0.652
605	6	2.91	34.11	1.07	7.65	600	2.92	34.11	27.20	88	0.745
805	6	2.79	34.27	0.90	7.65	800	2.79	34.27	27.34	75	0.916
1005	6	2.63	34.40	0.93	7.65	1000	2.65	34.40	27.46	64	1.064

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W *°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SATSUMA; August 2, 1955; 1930-2330 GCT; 34°00'N, 140°54'E; 2705 01 266 27x2 27x4 1 24-x 1 1
3500-1 x 1 x x..

0		27.0	34.43	4.55	0.00	8.35	0	27.0	34.43	22.31	554	0.000
10		27.11	34.42	4.50	0.00	8.35	10	27.11	34.42	22.26	559	0.056
25		26.00	34.36	4.65	0.00	8.35	25	26.00	34.36	22.58	528	0.137
50		21.18	34.58	5.20	0.00	8.35	50	21.18	34.58	24.16	377	0.251
100		17.96	34.72	4.67	0.00	8.30	100	17.96	34.72	25.09	288	0.418
161	31	17.01	34.70	4.62	0.03	8.25	150	17.12	34.70	25.27	271	0.559
204	31	16.62	34.70	4.75	0.03	8.25	200	16.66	34.70	25.39	260	0.695
291	31	15.53	34.69	4.59	0.26	8.25	300	15.42	34.67	25.64	236	0.950
385	31	12.96	34.43	3.44	0.27	8.10	400	12.61	34.42	26.03	199	1.178
516	37	9.70	34.25	3.59	0.40	8.00	500	10.18	34.27	26.37	167	1.370
608	37	6.51	34.05	3.13	1.55	8.00	600	6.75	34.07	26.75	130	1.527
795	37	4.67	34.16	1.72	1.75	7.90	800	4.62	34.16	27.07	101	1.774
1023	46	3.66	34.31	0.93	2.08	7.90	1000	3.70	34.29	27.27	82	1.972
1210	46	3.16	34.42	1.11	2.34	7.90	1200	3.20	34.40	27.41	68	2.141
1497	46	2.57	34.51	1.05	1.88	7.85	1500	(2.53)	(34.51)	(27.56)	(54)	(2.348)

SATSUMA; August 3, 1955; 0800-0930 GCT; 33°02'N, 141°54'E; 2302 02 280 33x1 18x3 2 40-22 1 2
9000-1 x 1 x.

0		28.7	34.45	4.53	0.00	8.35	0	28.7	34.45	21.78	605	0.000
13	0	27.39	34.42	4.39	0.00	8.35	10	27.65	34.42	22.13	571	0.059
25	0	26.88	34.40	4.43	0.00	8.35	25	26.88	34.40	22.33	552	0.143
50	0	22.40	34.60	4.89	0.00	8.35	50	22.40	34.60	23.83	408	0.263
100	0	18.88	34.76r	-	0.00	8.35	100	18.88	34.70	24.85	311	0.444
148	4	17.58	34.70	3.90	0.00	8.20	150	17.52	34.70	25.18	280	0.594
198	4	16.85	34.70	4.55	0.06	8.20	200	16.85	34.70	25.34	264	0.733
297	4	15.94	34.65	4.08	0.09	8.20	300	15.90	34.65	25.52	247	0.995
397	4	14.11	34.54	3.96	0.23	8.15	400	14.06	34.54	25.84	217	1.238
499	0	11.73	34.38	3.74	0.43	8.10	500	11.67	34.38	26.18	185	1.449
599	0	8.77	34.29	3.58	1.55	8.00	600	8.70	34.27	26.62	143	1.623
794	0	4.62	34.04	2.48	2.08	7.90	800	4.60	34.04	26.98	109	1.893
1041	8	3.64	34.24	0.81	2.21	7.80	1000	3.80	34.20	27.18	90	2.107
1241	8	3.10	34.40	0.85	2.41	7.70	1200	3.20	34.36	27.38	71	2.287
1541	8	2.52	34.49	0.86	2.57	7.70	1500	2.58	34.49	27.54	56	2.501

SATSUMA; August 3, 1955; 1715-2025 GCT; 32°04'N, 142°53'E; 1801 02 267 00x0 18x1 2 x 1 3
6500-1 x 1 x.

0		28.1	34.67	4.70	0.10	8.35	0	28.1	34.67	22.14	570	0.000
10	2	27.43	34.58	4.08	0.00	8.35	10	27.43	34.58	22.29	556	0.056
25	2	26.67	34.61	4.15	0.00	8.35	25	26.67	34.61	22.56	530	0.138
50	2	22.52	-	4.99	0.00	8.35	50	22.52	34.70	23.86	406	0.255
99	2	18.49	34.76	4.89	0.00	8.30	100	18.43	34.76	25.00	297	0.432
150	0	17.23	34.74	4.71	0.06	8.30	150	17.23	34.74	25.28	270	0.575
200	0	16.85	-	4.89	0.05	8.25	200	16.85	34.72	25.36	263	0.712
300	0	16.26	34.67	4.52	0.14	8.25	300	16.26	34.67	25.46	253	0.977
399	0	14.85	34.61	-	0.17	8.20	400	14.84	34.61	25.73	227	1.228
500	0	12.46	34.43	3.92	0.48	8.20	500	12.46	34.43	26.07	195	1.450
594	0	9.81	34.25	3.69	0.74	8.10	600	9.62	34.24	26.44	160	1.638
791	0	4.90	34.00	2.88	2.27	7.95	800	4.82	34.00	26.93	113	1.931
980	20	4.02	34.20	1.34	2.08	7.80	1000	3.92	34.22	27.19	88	2.150
1176	20	3.24	-	-	2.37	7.70	1200	3.15	34.40	27.41	68	2.327
1196	23	3.16	34.38	0.72	-	7.80	1500	2.56	34.51	27.56	54	2.533
1370	25	2.80	34.45	0.90	2.41	7.80	2000	(2.19)	(34.72)	(27.76)	(35)	(2.795)
1870	25	2.22	34.67	2.33	2.41	-						

4

SATSUMA; August 4, 1955; 0405-0545 GCT; 31°58'N, 144°17'E; 0902 03 284 00x0 09x1 2 26-x 1 6000-1 x 1 x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm³/g	dyn. m
0		28.3	34.67	4.69	0.00	8.35	0	28.3	34.67	22.07	577	0.000
10	0	27.38	34.63	4.44	0.00	8.35	10	27.38	34.63	22.35	550	0.056
25	0	26.42	34.60	4.62	0.00	8.35	25	26.42	34.60	22.64	522	0.137
50	0	20.45	34.85	5.25	0.00	8.30	50	20.45	34.85	24.55	340	0.245
96	0	18.25	34.76	4.94	0.00	8.30	100	18.15	34.76	25.07	290	0.403
184	33	16.99	34.70	5.04	0.08	8.20	150	17.29	34.72	25.25	273	0.546
232	33	16.80	34.70	4.94	0.08	8.20	200	16.90	34.70	25.32	266	0.684
320	33	16.58	34.70	4.90	0.12	8.20	300	16.64	34.70	25.39	260	0.954
415	33	15.61	34.65	4.23	0.34	8.20	400	15.85	34.67	25.55	244	1.217
499	50	13.99	34.54	4.21	0.43	8.15	500	13.97	34.54	25.86	215	1.459
590	50	11.21	34.33	3.90	0.61	8.05	600	10.87	34.31	26.28	175	1.666
780	50	5.75	34.98	3.30	1.68	7.98	800	5.39	34.00	26.87	119	1.981
1003	46	4.15	34.18	1.27	1.68	7.85	1000	4.19	34.18	27.14	94	2.211
1203	46	3.43	34.33	0.81	2.37	7.85	1200	3.44	34.33	27.34	75	2.400
1500	46	2.66	34.49	0.82	2.24	7.80	1500	2.66	34.49	27.54	56	2.622

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SATSUMA; August 4, 1955; 1300-1502 GCT; 31°54'N, 145°37'E; 1402 80 272 14x1 14x1 1 x x 6500-1 x 1 x.

0		27.7	34.74	4.67	0.00	8.35	0	27.7	34.74	22.32	553	0.000
10	0	27.72	34.63	4.52	0.00	8.35	10	27.72	34.63	22.23	561	0.056
25	0	26.61	34.60	4.69	0.00	8.35	25	26.61	34.60	22.56	530	0.137
50	0	21.92	34.96	5.22	0.00	8.25	50	21.92	34.96	24.23	370	0.250
98	0	18.53	34.78	5.23	0.01	8.25	100	18.47	34.78	25.02	295	0.418
166	19	17.13	34.74	4.60	0.27	8.20	150	17.37	34.74	25.25	273	0.561
214	19	16.76	34.70	4.64	0.27	8.20	200	16.81	34.72	25.34	264	0.699
313	19	16.00	34.67	4.51	0.35	8.20	300	16.15	34.70	25.51	248	0.962
412	19	14.45	34.56	4.27	0.43	8.10	400	14.72	34.58	25.72	228	1.211
497	21	12.08	34.40	4.01	0.61	8.05	500	11.98	34.40	26.14	188	1.430
594	21	9.40	34.27	3.83	1.38	8.05	600	9.28	34.27	26.52	152	1.610
792	21	4.91	-	2.83	2.01	7.90	800	4.84	34.20	27.08	100	1.881
1050	22	3.79	34.27	1.17	2.27	7.80	1000	3.88	34.22	27.19	89	2.087
1245	22	3.24	34.36	0.86	2.18	7.80	1200	3.39	34.33	27.34	75	2.271
1540	22	2.62	34.49	0.86	2.21	7.80	1500	2.66	34.47	27.52	58	2.495

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SATSUMA; August 4, 1955; 2100-2244 GCT; 31°51'N, 146°35'E; 0902 03 272 09x1 14x1 2 x 1 6500-1 x 1 x.

0		27.7	34.58	4.55	0.21	8.35	0	27.7	34.58	22.20	564	0.000
10	0	27.68	34.60	4.32	0.00	8.35	10	27.68	34.60	22.22	562	0.056
25	0	26.65	-	4.80	0.00	8.35	25	26.65	34.63	22.57	529	0.138
50	0	20.64	34.69	5.36	0.00	8.35	50	20.64	34.69	24.38	356	0.249
97	0	17.86	34.78	4.95	0.23	8.30	100	17.80	34.78	25.17	281	0.409
153	1	16.98	34.70	4.98	0.00	8.30	150	17.00	34.70	25.30	268	0.548
203	1	16.66	34.69	4.90	0.17	8.25	200	16.69	34.69	25.37	262	0.684
303	1	16.03	34.67	4.57	0.22	8.22	300	16.07	34.67	25.50	249	0.946
403	1	14.54	34.58	4.26	0.39	8.20	400	14.62	34.58	25.75	225	1.194
510	9	11.84	34.38	4.06	0.68	8.10	500	12.09	34.40	26.13	189	1.412
606	9	9.20	34.22	3.75	1.25	8.00	600	9.39	34.24	26.48	156	1.595
811	9	4.57	33.96	2.84	1.68	7.90	800	4.67	34.96	26.92	114	1.883
1016	19	3.79	34.24	1.20	1.91	7.75	1000	3.82	34.22	27.20	88	2.100
1207	19	3.26	34.34	0.64	1.68	7.75	1200	3.28	34.34	27.35	74	2.281
1506	19	2.59	34.47	0.81	2.60	7.75	1500	2.60	34.47	27.43	66	2.520

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ✕°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SATSUMA; August 5, 1955; 0930-1115 GCT; 31°58'N, 148°26'E; 1002 02 272 14x1 14x1 2 x 1 7
5500-1 x 1 x.

0		28.3	34.83	4.61	0.00	8.35	0	28.3	34.83	22.20	564	0.000
10	0	27.80	34.70	4.34	0.00	8.30	10	27.80	34.70	22.26	559	0.056
25	0	23.53	34.67	5.11	0.00	8.30	25	23.53	34.67	23.56	434	0.131
50	0	21.20	34.72	5.13	0.00	8.30	50	21.20	34.72	24.25	368	0.231
96	0	19.57	34.76	4.70	0.21	8.30	100	19.45	34.76	24.74	322	0.405
152		17.75	34.74	4.85	0.14	8.30	150	17.79	34.74	25.15	282	0.558
201		17.01	34.70	4.90	0.22	8.25	200	17.02	34.70	25.30	268	0.698
299		16.43	34.70	4.63	0.13	8.25	300	16.42	34.70	25.44	255	0.966
398		14.80	34.58	4.09	0.60	8.25	400	14.71	34.58	25.73	227	1.218
504	17	11.66	34.36	3.98	0.70	8.05	500	11.76	34.36	26.16	187	1.436
603	17	9.07	34.20	3.81	1.38	8.00	600	9.13	34.20	26.49	155	1.617
802	17	4.49	33.95	3.04	1.71	7.90	800	4.50	33.95	26.93	113	1.903
1010	15	3.83	34.20	1.38	1.71	7.80	1000	3.86	34.18	27.17	91	2.123
1206	15	3.22	34.36	1.01	1.78	7.80	1200	3.24	34.36	27.37	72	2.306
1505	15	2.57	34.63	0.86	2.37	7.75	1500	2.58	34.63	27.66	45	2.505

SATSUMA; August 5, 1955; 1950-2200 GCT; 32°00'N, 150°00'E; 0702 02 266 07x1 07x1 2 30-0 1 8
5500-1 x 1 x.

0		27.6	34.79	4.54	0.00	8.35	0	27.6	34.79	22.39	546	0.000
10		27.52	34.67	4.55	0.00	8.35	10	27.52	34.67	22.32	553	0.055
25		26.63	34.69	4.63	0.00	8.35	25	26.63	34.69	22.63	523	0.136
50		21.66	34.70	5.29	0.00	8.30	50	21.66	34.70	24.11	382	0.249
99		18.60	34.78	5.31	0.16	8.25	100	18.55	34.78	24.99	298	0.420
158	9	17.36	34.70	4.87	0.16	8.20	150	17.48	34.70	25.19	279	0.566
207	9	16.72	34.70	4.80	0.00	8.20	200	16.79	34.70	25.35	263	0.705
307	9	15.68	34.63	4.53	0.39	8.20	300	15.77	34.65	25.55	244	0.965
406	9	13.84	34.51	4.25	0.00	8.10	400	14.00	34.52	25.82	219	1.207
506	15	11.11	34.33	4.12	0.82	8.10	500	11.29	34.34	26.23	180	1.417
602	15	9.13	34.22	3.84	1.22	8.00	600	9.20	34.22	26.49	155	1.595
797	15	5.00	33.95	3.05	1.71	7.90	800	4.95	33.95	26.87	119	1.888
1015	23	3.98	34.20	1.21	2.08	7.80	1000	4.01	34.18	27.15	93	2.116
1205	23	3.28	34.34	0.99	2.21	7.80	1200	3.27	34.34	27.36	73	2.303
1495	23	2.60	34.47	0.84	2.41	7.80	1500	(2.58)	(34.47)	(27.52)	(58)	(2.523)

SATSUMA; August 6, 1955; 0700-0950 GCT; 32°00'N, 151°33'E; 1302 02 267 14x1 14x2 2 32-0 1 9
5500-1 x 1 x x.

0		28.0	34.60	4.55	0.00	8.35	0	28.0	34.60	22.12	572	0.000
10		27.29	34.70	4.58	0.00	8.35	10	27.29	34.70	22.42	543	0.056
25		26.40	34.65	4.66	0.00	8.35	25	26.40	34.65	22.66	520	0.135
50		21.17	34.74	5.29	0.00	8.30	50	21.17	34.74	24.27	367	0.247
97		19.24	34.76	4.66	0.12	8.25	100	19.15	34.76	24.82	314	0.418
159	15	17.38	34.78	4.77	0.12	8.10	150	17.57	34.78	25.24	274	0.567
206	15	16.93	34.72	4.79	0.12	8.10	200	16.98	34.72	25.34	264	0.704
304	15	16.43	34.69	4.78	0.14	8.10	300	16.46	34.69	25.42	257	0.972
402	15	15.02	34.60	4.15	0.23	8.10	400	15.08	34.61	25.67	233	1.228
513	20	12.60	34.43	3.88	0.69	8.10	500	12.98	34.47	26.01	201	1.456
609	20	9.86	34.25	3.76	0.95	8.10	600	10.10	34.27	26.38	166	1.651
803	20	5.19	34.00	2.79	1.48	8.00	800	5.21	34.00	26.88	118	1.955
979	25	4.17	34.16	1.44	1.88	7.70	1000	4.08	34.18	27.14	94	2.184
1167	25	3.48	34.29	0.91	1.98	7.70	1200	3.35	34.31	27.32	77	2.375
1465	25	2.77	34.45	0.74	2.14	7.70	1500	2.70	34.47	27.51	59	2.604
1981	24	2.11	34.58	1.33	1.65	7.80	2000	2.09	34.58	27.66	45	2.911
2470	24	1.80	34.63	2.05	1.88	7.80	2500	1.79	34.63	27.72	39	3.161
2960	24	1.62	34.67	2.57	1.58	7.95	3000	(1.62)	(34.69)	(27.78)	(33)	(3.399)

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

10

SATSUMA; August 6, 1955; 1745-1915 GCT; 32°00'N, 153°00'E; 1304 02 264 14x2 14x2 2 x x 5000-1 x 1 x.

0		27.1	34.78	4.60	0.00	8.35	0	27.1	34.78	22.54	532	0.000
10	10	27.32	34.74	4.56	0.00	8.35	10	27.32	34.74	22.44	541	0.054
25	10	23.84	34.63	5.11	0.00	8.35	25	23.84	34.63	23.42	448	0.128
50	10	21.02	34.74	5.22	0.00	8.35	50	21.02	34.74	24.30	364	0.230
71	14	19.58	34.78	5.21	0.09	8.30	100	18.37	34.72	24.99	298	0.396
97	10	18.42	34.72	5.00	0.00	8.30	150	17.39	34.69	25.21	277	0.542
121	14	17.82	34.69	4.66	0.16	8.25	200	16.97	34.67	25.28	270	0.681
220	14	16.82	34.69	4.84	0.13	8.25	300	16.58	34.65	25.36	263	0.955
320	14	16.49	34.67	4.89	0.13	8.20	400	15.51	34.58	25.54	245	1.220
515	22	13.31	34.43	4.47	0.39	8.15	500	13.70	34.43	25.83	218	1.463
613	22	10.27	34.22	4.24	0.89	8.00	600	10.66	34.25	26.27	176	1.672
812	22	4.93	33.91	3.17	1.25	7.90	800	5.12	33.93	26.84	122	1.991
935	22	4.88	34.16	1.22	1.55	7.75	1000	3.90	34.22	27.19	89	2.219
1236	22	3.27	34.31	-	1.88	7.75	1200	3.40	34.29	27.31	78	2.406
1532	22	2.65	34.43	0.88	1.58	7.70	1500	2.73	34.42	27.47	63	2.643

11

SATSUMA; August 7, 1955; 0430-0605 GCT; 32°00'N, 154°29'E; 0908 02 274 09x3 09x2 2 30-0 1 5500-1 x 1 x x.

0		27.4	34.60	4.52	0.00	8.35	0	27.4	34.60	22.31	554	0.000
10	0	27.36	34.58	4.48	0.09	8.30	10	27.36	34.58	22.31	554	0.055
25	0	26.74	34.76	4.60	0.00	8.30	25	26.74	34.76	22.64	522	0.136
50	0	22.50	34.79	5.19	0.08	8.30	50	22.50	34.79	23.94	398	0.251
99	0	18.34	34.76	5.09	0.08	8.30	100	18.34	34.76	25.03	294	0.425
158	9	17.17	34.70	4.94	0.08	8.30	150	17.26	34.70	25.24	274	0.569
208	9	16.81	34.70	4.97	0.13	8.30	200	16.87	34.70	25.34	264	0.707
306	9	16.61	34.70	4.97	0.16	8.30	300	16.63	34.70	25.39	260	0.976
406	9	15.87	34.65	4.47	0.25	8.20	400	15.93	34.65	25.51	248	1.241
510	11	13.75	34.58	3.99	0.25	8.10	500	14.02	34.56	25.86	215	1.485
609	11	10.98	34.33	3.75	1.45	8.00	600	11.26	34.36	26.25	178	1.694
808	11	5.59	33.95	3.47	1.75	7.90	800	5.76	33.96	26.78	128	2.020
1017	10	4.04	34.16	1.31	2.24	7.75	1000	4.09	34.15	27.12	96	2.264
1215	10	3.34	34.33	0.91	2.67	7.70	1200	3.42	34.31	27.31	78	2.458
1515	10	2.70	34.65	0.78	2.80	7.70	1500	2.72	34.61	27.62	48	2.672

12

SATSUMA; August 7, 1955; 1400-1540 GCT; 32°00'N, 156°00'E; 0708 02 264 07x4 09x3 1 x x 5500-1 x 1 x x.

0		26.8	34.56	4.59	0.00	8.40	0	26.8	34.56	22.47	539	0.000
10	13	27.00	34.54	4.56	0.00	8.30	10	27.00	34.54	22.40	545	0.054
25	13	25.05	34.43	4.87	0.00	8.30	25	25.05	34.43	22.92	495	0.132
50	13	23.08	34.69	4.71	0.00	8.30	50	23.08	34.69	23.70	421	0.247
94	13	20.12	34.76	4.32	0.10	8.30	100	19.67	34.76	24.70	326	0.435
179	19	17.30	34.67	5.14	0.19	8.20	150	17.82	34.69	25.10	287	0.590
227	19	16.80	34.96	4.96	0.22	8.20	200	17.06	34.67	25.27	271	0.732
325	19	16.08	34.65	4.58	0.27	8.20	300	16.31	34.65	25.43	256	1.003
424	19	14.24	34.54	4.12	0.48	8.10	400	14.78	34.56	25.69	231	1.257
571	24	10.46	34.24	4.40	1.09	8.10	500	12.35	34.40	26.07	195	1.485
669	24	7.55	34.05	3.97	1.22	8.00	600	9.56	34.18	26.40	164	1.671
867	24	4.32	34.04	2.20	1.65	7.90	800	4.93	34.00	26.92	114	1.969
1060	21	3.68	34.24	1.03	1.35	7.80	1000	3.78	34.16	27.16	92	2.191
1255	21	3.08	34.36	0.84	1.68	7.70	1200	3.23	34.34	27.36	73	2.375
1546	21	2.49	34.47	0.92	1.85	7.70	1500	2.57	34.45	27.51	59	2.597

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W x°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SATSUMA; August 7-8, 1955; 2340-0113 GCT; 31°58'N, 157°31'E; 0906 02 272 09x2 09x3 2 25-15 1 13
3500-1 x 1 x x.

0		26.9	34.76	4.56	0.03	8.35	0	26.9	34.76	22.59	527	0.000
10	5	26.87	34.69	4.50	0.00	8.35	10	26.87	34.69	22.55	530	.053
25	5	26.16	34.65	4.65	0.00	8.35	25	26.16	34.65	22.74	512	0.131
50	5	22.37	34.60	5.09	0.00	8.35	50	22.37	34.60	23.83	408	0.246
97	5	19.12	34.76	5.19	0.00	8.30	100	19.04	34.74	24.82	314	0.427
161	21	17.57	34.72	4.54	0.22	8.20	150	17.79	34.69	25.12	286	0.578
210	21	16.82	34.67	4.31	0.35	8.20	200	16.94	34.69	25.31	267	0.719
306	21	15.08	34.60	4.08	0.44	8.15	300	15.21	34.60	25.64	236	0.978
403	21	13.23	34.47	3.93	0.58	8.10	400	13.28	34.47	25.94	207	1.209
506	30	10.89	34.27	4.00	1.22	8.10	500	11.04	34.24	26.19	184	1.415
601	30	8.05	34.04	4.29	1.42	8.00	600	8.10	34.04	26.53	151	1.592
790	30	4.53	34.02	2.55	1.48	7.95	800	4.48	34.04	27.00	107	1.867
1045	24	3.68	34.22	0.91	2.01	7.75	1000	3.76	34.18	27.19	88	2.078
1246	24	3.07	34.36	0.83	2.21	7.75	1200	3.20	34.33	27.35	74	2.260
1536	24	2.54	34.47	0.96	2.21	7.75	1500	2.60	34.45	27.50	60	2.484

SATSUMA; August 8, 1955; 0915-1050 GCT; 32°00'N, 159°00'E; 0703 02 270 07x1 07x4 2 x x 14
2500-1 x 1 x x.

0		27.2	34.81	4.47	0.00	8.35	0	27.2	34.81	22.53	533	0.000
10	8	27.19	34.80	4.50	0.00	8.35	10	27.19	34.80	22.54	532	0.053
25	8	26.99	34.80	4.50	0.00	8.35	25	26.99	34.80	22.59	527	0.133
50	8	21.00	34.70	5.13	0.00	8.30	50	21.00	34.70	24.27	367	0.245
97	8	18.31	34.72	4.92	0.08	8.30	100	18.23	34.72	25.02	295	0.411
163	30	17.08	34.69	4.85	0.17	8.20	150	17.22	34.70	25.25	273	0.555
208	30	16.82	34.69	4.91	0.10	8.20	200	16.89	34.69	25.32	266	0.693
301	30	16.16	34.69	4.63	0.19	8.20	300	16.18	34.69	25.49	250	0.958
397	30	14.60	34.54	4.37	0.35	8.10	400	14.53	34.54	25.74	226	1.207
509	37	11.90	34.36	4.49	0.55	7.95	500	12.13	34.36	26.08	194	1.428
598	37	8.79	34.15	4.08	1.55	7.90	600	8.70	34.15	26.51	153	1.611
791	37	4.77	33.96	2.78	2.08	7.80	800	4.67	33.96	26.91	115	1.897
1028	45	3.77	34.24	1.18	2.01	7.70	1000	3.77	34.20	27.19	89	2.116
1217	45	3.14	34.38	0.85	2.24	7.70	1200	3.26	34.36	27.37	72	2.296
1514	45	2.56	34.49	0.96	2.34	7.70	1500	2.60	34.49	27.54	56	2.512

SATSUMA; August 8, 1955; 1900-2120 GCT; 31°58'N, 160°25'E; 0903 02 266 09x1 07x4 2 32-0 1 15
5500-1 x 1 x.

0		26.7	34.65	4.70	0.55	8.35	0	26.7	34.65	22.57	529	0.000
10	0	26.86	34.58	4.58	0.00	8.35	10	26.86	34.58	22.46	540	0.053
25	0	25.84	34.56	4.90	0.00	8.35	25	25.84	34.56	22.78	509	0.132
50	0	22.23	34.63	5.06	0.00	8.35	50	22.23	34.63	23.90	402	0.246
97	0	19.50	34.76	4.55	0.13	8.30	100	19.42	34.76	24.74	322	0.428
156	12	17.41	34.70	5.22	-	8.20	150	17.60	34.72	25.18	280	0.581
205	12	17.02	34.69	4.85	0.17	8.20	200	17.05	34.69	25.29	269	0.721
304	12	16.16	34.63	4.53	0.26	8.20	300	16.22	34.63	25.44	255	0.990
403	12	14.33	34.54	4.09	0.48	8.15	400	14.44	34.56	25.76	225	1.240
520	10	11.28	34.33	4.13	0.86	8.15	500	11.83	34.40	26.17	186	1.456
619	10	8.15	34.07	4.21	1.35	8.05	600	8.70	34.11	26.49	155	1.637
817	10	4.29	33.98	2.39	1.85	7.90	800	4.51	33.98	26.94	112	1.922
1030	13	3.73	34.25	1.20	1.71	7.75	1000	3.77	34.22	27.21	87	2.136
1220	10	3.19	34.40	0.81	-	7.70	1200	3.30	34.38	27.39	70	2.312
1517	13	2.60	34.45	0.77	1.91	7.70	1500	2.66	34.45	27.50	60	2.532

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
16	SATSUMA; August 9, 1955; 0730-1045 GCT; 32°00'N, 162°00'E; 0504 02 263 05x2 03x4 2 32-0 1											
5500-1 x 1 x x.												
0		26.5	34.85	4.63	0.00	8.35	0	26.5	34.85	22.79	508	0.000
10		26.81	34.79	4.53	0.00	8.30	10	26.81	34.79	22.64	522	0.051
25		25.45	34.65	4.81	0.00	8.30	25	25.45	34.65	22.96	492	0.127
50		21.07	34.69	5.11	0.00	8.30	50	21.07	34.69	24.26	368	0.235
100		18.29	34.72	4.89	0.09	8.30	100	18.29	34.72	25.01	296	0.402
148	21	17.17	34.70	4.81	0.10	8.30	150	17.16	34.70	25.27	271	0.546
193	21	16.94	34.69	4.81	0.16	8.30	200	16.94	34.69	25.31	267	0.683
288	21	16.36	34.67	4.82	-	8.20	300	16.27	34.67	25.46	253	0.950
386	21	14.63	34.58	4.04	0.29	8.20	400	14.30	34.56	25.80	221	1.198
516	30	10.66	34.27	4.27	0.49	8.10	500	11.23	34.33	26.22	181	1.409
611	30	7.52	34.02	4.36	0.61	8.10	600	7.78	34.04	26.58	147	1.583
806	30	3.90	33.93	2.55	1.55	8.00	800	3.94	33.93	26.96	111	1.857
1021	23	3.68	34.22	1.12	1.71	7.90	1000	3.69	34.18	27.19	89	2.071
1225	23	3.10	34.38	0.72	1.88	7.90	1200	3.19	34.38	27.39	70	2.249
1516	23	2.61	34.49	0.73	2.04	7.80	1500	2.65	34.38	27.44	65	2.476
1765	32	2.23	34.56	1.13	2.04	7.80	2000	2.02	34.58	27.66	45	2.799
2242	32	1.82	34.61	1.85	1.88	7.75	2500	1.73	34.67	27.75	36	3.099
2730	32	1.62	34.74	2.39	1.88	7.75						
17	SATSUMA; August 9, 1955; 1930-2115 GCT; 32°00'N, 163°30'E; 2507 03 260 25x3 05x3 1 31-0 1											
6300-1 x 1 x.												
0		26.5	35.28	4.62	0.00	8.35	0	26.5	35.28	23.12	476	0.000
10	20	26.67	35.19	4.75	0.00	8.35	10	26.67	35.19	22.99	489	0.048
25	20	26.66	35.19	4.57	0.00	8.35	25	26.66	35.19	22.99	489	0.122
49	20	22.36	34.60	5.13	0.09	8.35	50	22.27	34.60	23.87	405	0.234
92	20	19.32	34.87	5.19	0.00	8.35	100	19.00	34.87	24.94	302	0.411
156	29	17.58	34.78	4.95	0.05	8.30	150	17.71	34.79	25.21	277	0.558
202	29	16.65	34.69	4.81	0.17	8.20	200	16.68	34.69	25.38	261	0.695
295	29	15.57	-	4.79	0.34	8.20	300	15.50	34.60	25.57	243	0.954
393	29	13.77	34.47	4.44	0.43	8.20	400	13.55	34.17	25.88	213	1.192
538	25	9.84	34.22	4.32	0.57	8.10	500	10.69	34.27	26.28	175	1.336
635	25	7.55	34.04	3.97	1.35	8.00	600	8.42	34.09	26.51	153	1.550
834	25	4.73	34.05	1.96	1.91	7.80	800	5.02	34.04	26.94	112	1.883
1000	44	3.88	34.20	2.12	2.01	7.80	1000	3.88	34.20	27.18	90	2.002
1186	44	3.23	34.36	0.82	2.41	7.70	1200	3.21	34.38	27.39	70	2.222
1475	44	2.64	34.47	0.82	2.54	7.70	1500	(2.65)	(34.47)	(27.52)	(58)	(2.449)
18	SATSUMA; August 10, 1955; 0428-0610 GCT; 32°00'N, 165°00'E; 1812 03 252 18x4 16x3 1 22-0 1											
6300-1 x 1 x x.												
0		24.6	34.72	4.94	0.00	8.35	0	24.6	34.72	23.29	460	0.000
10	6	24.59	34.67	4.90	0.00	8.35	10	24.59	34.67	23.25	464	0.046
25	6	24.27	34.65	5.13	0.00	8.35	25	24.27	34.65	23.33	456	0.115
50	6	18.10	34.72	5.55	0.17	8.35	50	18.10	34.72	25.05	292	0.209
98	6	17.07	34.69	4.98	0.17	8.30	100	17.05	34.69	25.28	270	0.351
157	10	16.51	34.69	4.93	0.21	8.20	150	16.55	34.69	25.40	259	0.485
206	10	16.34	34.69	5.09	0.21	8.20	200	16.37	34.69	25.46	253	0.615
305	10	15.72	34.69	4.89	0.10	8.20	300	15.80	34.69	25.58	242	0.870
405	10	14.64	34.54	4.58	0.30	8.20	400	14.72	34.56	25.70	230	1.117
519	15	12.04	34.36	4.41	0.56	8.10	500	12.57	34.40	26.02	200	1.343
616	15	9.26	34.16	4.29	0.92	8.00	600	9.69	34.20	26.40	164	1.536
810	15	5.10	34.11	2.86	1.42	7.95	800	5.25	34.11	26.96	111	1.831
1053	20	3.75	34.24	0.93	1.55	7.80	1000	3.88	34.18	27.17	91	2.050
1250	20	3.18	34.36	0.74	1.58	7.80	1200	3.25	34.33	27.35	74	2.235
1545	20	2.58	34.47	0.77	1.09	7.80	1500	2.65	34.45	27.50	60	2.461

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	ϰ°	°C	‰	ml/L	µg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SATSUMA; August 10, 1955; 1230-1435 GCT; 32°00'N, 166°15'E; 1620 02 249 16x6 xxxx 1 x x 19
6300-1 x 1 x x.

0		23.8	34.43	4.93		8.35	0	23.8	34.43	23.29	460	0.000
10	24	23.68	34.40	4.94		8.35	10	23.68	34.40	23.32	457	0.046
29	24	23.61	34.40	4.96		8.35	25	23.60	34.40	23.33	456	0.114
53	24	23.41	34.43	4.84		8.35	50	23.47	34.42	23.39	451	0.228
77	24	18.64	34.76	5.33		8.30	100	17.97	34.76	25.12	285	0.413
141	60	17.08	34.70	4.95		8.30	150	16.97	34.70	25.31	267	0.553
167	60	16.79	34.69	4.93		8.30	200	16.53	34.69	25.40	259	0.687
243	60	16.25	34.69	4.87		8.30	300	15.71	34.65	25.56	244	0.946
330	60	15.25	34.61	4.66		8.30	400	13.75	34.51	25.88	213	1.185
386	60	14.09	34.52	4.49		8.25	500	11.09	34.36	26.28	175	1.389
471	60	11.89	34.40	4.51		8.20	600	7.88	34.13	26.63	142	1.557
648	60	6.54	34.00	3.82		8.00	800	4.85	34.02	26.94	112	1.829
1025	53	3.64	34.25	0.84		7.75	1000	3.77	34.22	27.20	88	2.045
1220	53	3.09	34.38	0.93		7.75	1200	3.12	34.38	27.40	69	2.220
1513	53	2.49	34.47	0.86		7.70	1500	2.50	34.47	27.53	57	2.431

SATSUMA; August 11, 1955; 0200-0350 GCT; 32°02'N, 168°45'E; 1827 03 260 18x8 18x9 2 26-x 1 21
6000-1 x 1 x.

0		25.8	34.90	4.66		8.40	0	25.8	34.90	23.05	483	0.000
10	28	25.92	34.96	4.60		8.40	10	25.92	34.96	23.05	483	0.048
24	28	25.92	34.92	4.60		8.40	25	25.92	34.92	23.01	487	0.121
48	28	25.39	34.96	4.75		8.40	50	25.30	34.96	23.24	465	0.240
87	28	18.34	34.69	5.43		8.30	100	17.97	34.69	25.07	290	0.430
161	35	16.90	34.69	4.88		8.25	150	17.08	34.69	25.28	270	0.572
205	35	16.50	34.69	4.77		8.25	200	16.53	34.69	25.40	259	0.707
296	35	15.25	34.60	4.66		8.20	300	15.16	34.60	25.65	235	0.961
393	35	13.49	34.45	4.67		8.20	400	13.37	34.43	25.89	212	1.195
510	45	11.06	34.29	4.53		8.10	500	11.33	34.29	26.17	186	1.404
607	45	8.70	34.11	4.14		8.00	600	8.89	34.13	26.47	157	1.585
805	45	4.60	33.96	2.80		8.00	800	4.67	33.96	26.92	114	1.874
927	58	4.10	34.13	1.40		7.90	1000	4.02	34.17	27.14	94	2.098
1115	58	3.51	34.29	0.85		7.80	1200	3.22	34.33	27.35	74	2.286
1404	58	2.73	34.43	0.78		7.80	1500	(2.61)	(34.47)	(27.52)	(58)	(2.508)

SATSUMA; August 11, 1955; 1040-1350 GCT; 32°02'N, 169°58'E; 1820 60 259 18x7 18x8 1 x x 22
5500-1 x 1 x.

0		25.6	34.78	4.58	0.09	8.35	0	25.6	34.78	23.02	486	0.000
10	9	25.59	34.79	4.55	0.00	8.35	10	25.59	34.79	23.03	485	0.049
25	9	25.52	34.74	4.63	0.00	8.35	25	25.52	34.74	23.00	488	0.121
50	9	20.40	34.92	5.36	0.00	8.35	50	20.40	34.92	24.62	333	0.224
95	9	17.63	34.72	5.31	0.00	8.35	100	17.52	34.72	25.19	279	0.378
155	35	16.60	34.69	4.81	0.08	8.30	150	16.68	34.69	25.38	261	0.515
198	35	16.09	34.67	4.77	0.09	8.30	200	16.07	34.67	25.49	250	0.646
290	35	15.19	34.58	4.91	0.10	8.30	300	15.08	34.58	25.64	236	0.896
388	35	13.77	34.49	4.54	0.23	8.20	400	13.56	34.47	25.89	212	1.130
517	35	11.09	34.31	4.33	0.49	8.10	500	11.41	34.33	26.20	183	1.337
610	35	8.20	34.07	4.03	1.55	8.10	600	8.52	34.11	26.51	153	1.515
806	35	4.57	34.00	2.63	1.98	7.90	800	4.65	34.00	26.95	111	1.797
1008	38	3.79	34.22	1.03	2.39	7.80	1000	3.80	34.22	27.21	87	2.010
1200	38	3.17	34.42	0.80	2.44	7.70	1200	3.17	34.42	27.42	67	2.183
1490	38	2.55	34.47	-	2.54	7.70	1500	2.53	34.47	27.52	58	2.394
1600	60	2.47	34.49	0.79	2.34	7.80	2000	1.98	34.58	27.67	44	2.808
2005	60	1.97	34.58	1.38	2.37	7.80	2500	(1.67)	(34.63)	(27.73)	(38)	(3.050)
2473	60	1.68	34.63	2.45	2.44	7.80						

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

23 SATSUMA; August 12, 1955; 0230–0428 GCT; 31°00'N, 172°00'E; 1605 25 245 16x2 23x4 1 21–0 1 4500–1 x 1 x.

0		25.9	34.96	4.69	0.42	8.35	0	25.9	34.96	23.06	482	0.000
10	7	26.00	34.94	4.58	0.00	8.35	10	26.00	34.94	23.01	487	0.048
25	7	25.89	34.96	4.56	0.00	8.35	25	25.89	34.96	23.06	482	0.121
50	7	19.56	34.72	5.45	0.00	8.35	50	19.56	34.72	24.68	328	0.223
96	7	17.36	34.72	5.17	0.08	8.30	100	17.28	34.72	25.26	272	0.374
162	11	16.65	34.72	4.94	0.21	8.25	150	16.77	34.72	25.38	261	0.509
211	11	16.39	34.69	4.84	0.21	8.20	200	16.44	34.70	25.43	256	0.641
310	11	15.30	34.61	4.38	0.26	8.20	300	15.47	34.61	25.58	242	0.897
414	11	12.77	34.42	4.62	0.36	8.15	400	13.25	34.45	25.92	209	1.132
512	14	10.20	34.22	4.52	0.95	8.05	500	10.48	34.25	26.31	172	1.332
610	14	7.84	34.07	–	1.22	8.00	600	8.13	34.09	26.56	149	1.501
807	14	4.56	34.04	2.33	2.01	7.80	800	4.64	34.04	26.98	109	1.777
983	31	3.87	34.20	1.12	2.27	7.75	1000	3.83	34.22	27.20	88	1.989
1165	31	3.30	34.36	0.62	2.34	7.70	1200	3.15	34.38	27.40	69	2.164
1455	31	2.65	34.47	0.74	2.44	7.70	1500	(2.62)	(34.49)	(27.54)	(56)	(2.373)

24 SATSUMA; August 12, 1955; 1715–1847 GCT; 30°00'N, 174°00'E; 1610 02 250 16x2 23x4 1 x 1 5000–1 x 1 x x.

0		26.0	34.74	4.69		8.35	0	26.0	34.74	22.86	501	0.000
10	20	26.29	34.94	5.01		8.35	10	26.29	34.94	22.93	494	0.050
25	20	25.79	35.01	4.91		8.35	25	25.79	35.01	23.14	474	0.122
53	20	20.02	34.96	5.39		8.35	50	20.35	34.98	24.68	328	0.223
93	20	17.58	34.78	5.26		8.30	100	17.44	34.78	25.24	274	0.374
141	46	17.01	34.76	5.00		8.30	150	16.92	34.76	25.36	263	0.510
183	46	16.34	34.69	4.92		8.25	200	16.00	34.67	25.51	248	0.640
279	46	15.16	34.58	5.06		8.25	300	14.86	34.56	25.68	232	0.887
364	51	13.86	34.49	4.81		8.10	400	13.14	34.43	25.94	207	1.117
439	51	12.33	34.38	4.81		8.10	500	10.87	34.29	26.26	177	1.319
533	51	10.05	34.22	4.74		8.05	600	8.43	34.15	26.56	149	1.491
820	51	4.76	34.05	2.04		7.80	800	5.00	34.05	26.95	111	1.769
1001	51	3.76	34.25	0.76		7.75	1000	3.76	34.25	27.24	84	1.980
1189	51	3.19	34.36	0.66		7.75	1200	3.13	34.36	27.38	71	2.180
1477	51	2.61	34.51	0.89		7.75	1500	(2.62)	(34.52)	(27.56)	(54)	(2.363)

25 SATSUMA; August 13, 1955; 0650–0830 GCT; 29°00'N, 176°00'E; 1815 64 234 18x3 18x8 1 x 1 5500–1 x 1 x x.

0		25.3	34.16			8.40	0	25.3	34.16	22.65	521	0.000
10	20	25.45	34.45			8.40	10	25.45	34.45	22.82	505	0.051
25	20	25.54	34.74			8.40	25	25.54	34.74	23.00	488	0.126
49	20	20.29	34.74			8.40	50	20.05	34.74	24.57	338	0.229
95	20	17.75	34.72			8.40	100	17.63	34.72	25.17	281	0.385
115	45	17.32	34.76			8.40	150	16.59	34.74	25.44	255	0.521
154	45	16.52	34.69			8.30	200	15.90	34.63	25.50	249	0.650
291	45	14.60	34.52			8.20	300	14.44	34.52	25.74	226	0.894
376	45	12.82	34.40			8.10	400	12.29	34.36	26.05	197	1.114
465	45	10.91	34.24			8.10	500	10.17	34.18	26.31	172	1.308
562	45	8.48	34.09			8.05	600	7.55	34.05	26.61	144	1.475
877	15	4.20	34.15			7.90	800	4.62	34.09	27.02	105	1.741
1073	15	3.52	34.31			7.80	1000	3.70	34.24	27.24	84	1.945
1270	15	3.04	34.42			7.80	1200	3.19	34.38	27.39	70	2.118
1570	15	2.48	34.51			7.80	1500	2.58	34.49	27.54	56	2.330

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SATSUMA; August 14, 1955; 0545-0750 GCT; 27°55'N, 172°34'E; 3115 02 266 31x4 27x9 2 25-0 1 5500-1 x 1 x. 26

0		27.1	35.23	4.56	0.00	8.35	0	27.1	35.23	22.88	499	0.000
15	3	27.33	35.14	4.50	0.00	8.35	10	27.31	35.16	22.75	511	0.050
30	3	27.19	35.23	4.57	0.00	8.35	25	27.28	35.21	22.81	506	0.127
55	3	20.83	35.05	5.10	0.00	8.35	50	23.00	35.10	24.32	362	0.236
102	3	18.17	34.76	5.40	0.00	8.30	100	18.23	34.78	25.06	291	0.400
152	3	16.81	34.72	4.85	0.27	8.25	150	16.85	34.72	25.36	263	0.540
216	9	15.85	34.63	4.65	0.27	8.25	200	16.08	34.67	25.50	249	0.671
315	9	13.97	34.45	4.47	0.39	8.15	300	14.32	34.47	25.71	229	0.917
414	9	11.71	34.31	4.57	0.55	8.15	400	12.04	34.33	26.07	195	1.138
514	9	9.45	34.15	4.46	1.68	8.05	500	9.78	34.18	26.37	167	1.328
613	9	6.76	34.00	3.61	-	7.95	600	7.14	34.00	26.64	141	1.490
835	11	4.44	34.15	1.30	-	7.75	800	4.63	34.11	27.03	104	1.751
1011	11	3.72	34.27	0.74	-	7.75	1000	3.79	34.25	27.24	84	1.954
1209	11	3.11	34.40	0.66	-	7.75	1200	3.13	34.40	27.41	68	2.124
1509	11	2.49	34.49u	-	-	7.85u	1500	2.51	34.49	27.54	56	2.332
1510	8	2.49	34.51u	1.06	-	7.75u						

SATSUMA; August 14, 1955; 1900-2015 GCT; 26°58'N, 170°58'E; 0906 02 264 09x1 11x5 2 22-0 x 5200-1 x 1 x x. 27

0		27.7	35.53	4.57	0.00	8.35	0	27.7	35.53	22.91	496	0.000
10	0	27.92	35.52	4.46	0.00	8.35	10	27.92	35.52	22.83	504	0.050
25	0	27.75	35.61	4.74	0.00	8.35	25	27.75	35.61	22.95	492	0.125
50	0	23.49	35.43	5.19	0.00	8.35	50	23.49	35.43	24.16	377	0.234
95	0	20.42	35.17	4.98	0.00	8.30	100	20.17	35.16	24.85	311	0.407
148	0	18.25	34.89	4.98	0.08	8.30	150	18.19	34.89	25.17	281	0.556
202	0	16.91	34.72	4.87	0.12	8.25	200	16.98	34.74	25.34	264	0.696
301	0	14.94	34.58	4.77	0.27	8.20	300	14.95	34.58	25.68	232	0.951
400	0	12.96	34.40	4.61	0.38	8.15	400	12.96	34.40	25.95	206	1.180
499	0	10.56	34.22	4.40	0.53	8.10	500	10.52	34.22	26.26	177	1.381
600	0	7.87	34.07	3.78	1.42	7.95	600	7.87	34.07	26.58	147	1.553
790	0	4.84	34.11	1.60	2.34	7.75	800	4.78	34.11	27.02	105	1.823
990	0	3.82	34.29	0.89	2.34	7.75	1000	3.79	34.29	27.27	82	2.026
1190	0	3.23	34.43	0.86	2.54	7.75	1200	3.19	34.43	27.44	65	2.192
1490	0	2.60	34.56	2.24	2.97	7.75	1500	(2.58)	(34.56)	(27.59)	(51)	(2.389)

SATSUMA; August 15, 1955; 1030-1150 GCT; 25°00'N, 168°45'E; 2706 02 274 27x2 27x4 2 x x 5500-1 x 1 x x. 28

0		28.0	35.44	4.56	0.00	8.40	0	28.0	35.44	22.75	511	0.000
10	5	28.14	35.39	4.51	0.00	8.40	10	28.14	35.39	22.66	520	0.052
25	5	28.14	35.43	4.52	0.00	8.40	25	28.14	35.43	22.69	517	0.129
50	5	24.96	35.37	4.93	0.00	8.40	50	24.96	35.37	23.66	425	0.247
103	15	21.07	35.08	4.73	0.00	8.30	100	21.15	35.10	24.55	340	0.440
154	15	19.68	35.12	4.94	0.00	8.30	150	19.80	35.12	24.92	304	0.603
204	15	17.54	34.81	4.81	0.13	8.30	200	17.67	34.85	25.26	272	0.750
313	21	14.65	34.54	4.41	0.17	8.20	300	14.98	34.58	25.67	233	1.009
420	20	11.55	34.29	4.22	0.56	8.10	400	12.13	34.34	26.06	196	1.233
514	20	9.04	34.13	3.69	0.73	8.00	500	9.42	34.15	26.39	165	1.422
612	20	6.98	34.07	2.79	1.68	7.90	600	7.18	34.07	26.68	137	1.581
857	18	4.39	34.29	0.94	2.31	7.80	800	4.78	34.29	27.16	92	1.827
1056	18	3.54	34.43	0.87	2.34	7.80	1000	3.81	34.40	27.35	74	2.009
1254	18	3.08	34.49	1.29	2.44	7.80	1200	3.15	34.47	27.47	63	2.164
1554	18	2.42	34.54	1.43	2.34	7.80	1500	2.61	34.52	27.56	54	2.363
1960	25	2.05	34.69	2.07	2.27	7.80	2000	2.02	34.69	27.74	37	2.638
2460	25	1.76	34.65	2.37	2.24	7.90	2500	1.75	34.63	27.72	39	2.868
2960	25	1.61	34.54	3.27	1.98	7.90						

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	ϰ°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

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SATSUMA; August 15, 1955; 2200-2330 GCT; 25°13'N, 167°06'E; 2703 25 273 27x1 27x2 2 39-0 1 5000-1 x 1 x.

0		28.2	35.16	4.52	0.00	8.35	0	28.2	35.16	22.48	538	0.000
10	0	28.25	35.16	4.43	0.00	8.35	10	28.25	35.16	22.45	540	0.054
25	0	27.91	35.16	4.44	0.00	8.35	25	27.91	35.16	22.56	530	0.134
50	0	23.71	35.14	5.03	0.00	8.35	50	23.71	35.14	23.84	407	0.252
99	0	20.01	34.98	4.95	0.00	8.35	100	19.95	34.98	24.78	318	0.434
148	0	17.93	34.79	4.51	0.00	8.25	150	17.87	34.79	25.16	282	0.586
206	5	16.45	34.69	4.69	0.25	8.20	200	16.53	34.70	25.41	258	0.724
305	5	15.83	34.56	4.40	0.34	8.20	300	14.98	34.56	25.66	234	0.977
405	5	12.04	34.34	4.44	0.58	8.10	400	12.22	34.34	26.05	197	1.202
503	5	9.66	34.16	4.23	1.12	8.00	500	9.75	34.16	26.36	168	1.393
603	5	6.65	34.02	3.26	1.71	7.90	600	6.73	34.02	26.71	134	1.552
815	5	4.51	34.20	1.21	2.18	7.75	800	4.62	34.16	27.07	101	1.802
1015	5	3.63	34.40	0.94	2.31	7.75	1000	3.69	34.40	27.37	72	1.990
1214	5	3.12	34.49	1.32	2.37	7.75	1200	3.12	34.47	27.47	63	2.143
1513	5	2.48	34.56	1.60	2.27	7.75	1500	2.55	34.56	27.59	51	2.336

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SATSUMA; August 16, 1955; 0730-0843 GCT; 25°11'N, 165°33'E; 2702 15 285 27x1 29x2 2 39-0 1 5200-1 x 1 x x.

0		28.7	35.21	4.49	0.00	8.35	0	28.7	35.21	22.35	550	0.000
15	10	28.06	35.19	4.66	0.00	8.35	10	28.20	35.19	22.49	537	0.054
30	10	28.01	35.17	4.45	0.00	8.35	25	28.03	35.17	22.53	533	0.135
55	10	24.11	35.12	5.14	0.00	8.35	50	25.35	35.14	23.36	454	0.258
102	10	19.69	34.87	5.12	0.00	8.30	100	19.87	34.87	24.73	323	0.454
142	10	17.71	34.70	4.70	0.08	8.30	150	17.46	34.69	25.18	280	0.606
225	13	15.94	34.61	4.62	0.23	8.25	200	16.31	34.63	25.41	258	0.743
323	13	14.17	34.47	4.49	0.38	8.20	300	14.70	34.52	25.68	232	0.995
422	13	11.46	34.27	4.40	0.55	8.15	400	12.00	34.33	26.09	193	1.217
521	13	8.96	34.09	4.03	1.25	8.10	500	9.52	34.15	26.38	166	1.406
620	13	6.62	34.98	3.32	1.35	7.90	600	7.03	34.00	26.65	140	1.567
850	13	4.53	34.18	1.13	1.71	7.75	800	4.81	34.13	27.03	104	1.828
1050	13	3.72	34.36	1.03	1.75	7.75	1000	3.91	34.33	27.28	81	2.030
1250	13	3.07	34.45	1.25	2.04	7.70	1200	3.20	34.43	27.44	65	2.196
1550	13	2.52	34.54	1.83	1.85	7.70	1500	2.58	34.52	27.56	54	2.398

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SATSUMA; August 16, 1955; 1645-1823 GCT; 25°08'N, 163°49'E; 0903 02 271 xxxx xxxx 1 x x 5000-1 x 1 x.

0		28.2	34.81	4.53	0.00	8.35	0	28.2	34.81	22.21	563	0.000
10	0	28.01	34.76	4.43	0.00	8.35	10	28.01	34.76	22.23	561	0.056
25	0	27.19	35.05	4.73	0.00	8.35	25	27.19	34.05	22.73	513	0.137
50	0	23.21	35.10	5.14	0.00	8.35	50	23.21	35.10	23.97	395	0.251
96	0	20.22	34.92	5.06	0.09	8.35	100	20.10	34.92	24.69	327	0.432
146	0	18.31	34.79	-	0.09	8.30	150	18.23	34.78	25.06	291	0.588
205	7	16.77	34.65	4.57	0.22	8.20	200	16.91	34.67	25.29	269	0.731
305	7	15.00	34.54	4.38	0.34	8.20	300	15.08	34.56	25.64	236	0.991
405	7	12.86	34.36	4.28	0.51	8.20	400	13.00	34.38	25.93	208	1.223
504	7	9.89	34.15	3.94	1.45	8.15	500	10.00	34.16	26.32	171	1.422
604	7	7.52	34.02	3.25	1.78	8.05	600	7.57	34.02	26.59	146	1.589
865	16	4.49	34.18	1.16	2.37	7.80	800	4.98	34.13	27.01	106	1.859
1060	16	3.75	34.34	1.13	2.64	7.75	1000	3.90	34.29	27.21	83	2.065
1257	16	3.21	34.47	2.46	2.77	7.75	1200	3.35	34.43	27.42	67	2.235
1555	16	2.63	34.54	1.80	2.97	7.70	1500	2.76	34.52	27.54	56	2.445

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	*°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SATSUMA; August 17, 1955; 0230-0417 GCT; 25°08'N, 162°20'E; 0907 25 275 09x4 09x2 2 34-0 1 32
5000-1 x 1 x x.

0		28.8	34.83	4.44	0.00	8.40	0	28.8	34.83	22.02	581	0.000
10	9	28.37	34.79	4.37	0.00	8.40	10	28.37	34.79	22.15	569	0.057
25	9	28.32	34.85	4.38	0.00	8.40	25	28.32	34.85	22.20	564	0.142
50	9	25.48	35.03	5.04	0.00	8.40	50	25.48	35.03	23.26	463	0.271
99	9	22.29	35.21	4.74	0.18	8.35	100	22.14	35.21	24.35	359	0.478
150	9	19.53	34.90	4.57	0.10	8.30	150	19.53	34.90	24.82	314	0.648
212	8	17.82	34.61	4.39	0.13	8.20	200	18.08	34.63	24.99	298	0.804
310	8	15.68	34.81	4.59	0.21	8.20	300	15.96	34.58	25.45	254	1.087
398	13	13.32	34.61	-	0.49	8.15	400	13.25	34.43	25.92	209	1.329
409	8	13.02	-	4.47	-	8.10	500	10.41	34.20	26.27	176	1.531
496	13	10.49	34.22	4.19	1.12	8.10	600	7.95	34.07	26.56	149	1.702
595	13	8.03	34.07	3.82	1.45	8.00	800	5.15	34.20	27.04	103	1.972
838	10	4.73	34.22	1.10	2.34	7.80	1000	3.83	34.27	27.26	83	2.174
1036	10	3.72	34.29	0.83	2.64	7.80	1200	3.14	34.42	27.43	66	2.341
1232	10	3.06	34.43	0.87	2.67	7.80	1500	2.51	34.52	27.56	54	2.543
1526	10	2.44	34.52	1.40	2.84	7.80						

SATSUMA; August 17, 1955; 1300-1620 GCT; 25°08'N, 160°45'E; 0705 02 278 07x1 xxx2 1 x x 33
5000-1 x 1 x x.

0		28.5	34.90	4.51	0.00	8.40	0	28.5	34.90	22.18	566	0.000
10	12	28.81	34.89	4.43	0.00	8.40	10	28.81	34.89	22.07	577	0.057
25	12	28.47	34.81	4.45	0.00	8.40	25	28.47	34.81	22.12	572	0.143
50	12	26.31	35.10	4.80	0.00	8.30	50	26.31	35.10	23.04	484	0.276
98	12	20.90	34.96	4.76	0.00	8.30	100	20.81	34.98	24.54	341	0.483
146	12	19.41	34.98	4.37	0.13	8.30	150	19.33	34.96	24.92	304	0.646
199	20	17.28	34.79	4.63	0.23	8.30	200	17.22	34.78	25.30	268	0.792
294	20	15.50	34.60	4.54	0.43	8.20	300	15.39	34.58	25.58	242	1.054
390	20	13.25	34.43	4.36	0.65	8.20	400	13.00	34.42	25.95	206	1.288
487	20	10.68	34.22	4.18	1.02	8.10	500	10.30	34.20	26.29	174	1.488
585	20	8.02	34.15	3.62	1.52	8.00	600	7.72	34.15	26.65	140	1.654
868	26	4.40	34.16	1.13	1.88	7.90	800	5.02	34.15	27.01	106	1.918
1066	26	3.69	34.33	0.82	2.27	7.90	1000	3.82	34.27	27.24	84	2.124
1265	26	3.07	34.45	1.05	2.64	7.85	1200	3.27	34.42	27.42	67	2.294
1565	26	2.44	34.54	1.63	2.21	7.85	1500	2.61	34.51	27.55	55	2.500
1930	25	2.00	34.58	2.17	2.51	7.85	2000	2.00	34.58	27.67	44	2.793
2420	25	1.76	34.61	2.57	2.67	7.90	2500	1.70	34.61	27.71	40	3.038
2910	25	1.55	34.63	2.25	2.31	7.90	3000	1.54	34.65	27.75	36	3.280

SATSUMA; August 18, 1955; 0000-0220 GCT; 25°08'N, 159°16'E; 0705 02 290 07x1 23x2 2 43-15 1 34
5000-1 x 1 x x.

0		28.6	35.07	4.47	0.00	8.35	0	28.6	35.07	22.29	556	0.000
10	5	28.17	34.85	4.46	0.00	8.35	10	28.17	34.85	22.25	559	0.056
25	5	27.70	35.03	4.55	0.00	8.35	25	27.70	35.03	22.54	532	0.138
50	5	22.64	35.08	5.22	0.00	8.35	50	22.64	35.08	24.12	381	0.252
104	13	19.56	34.89	5.04	0.00	8.25	100	19.70	34.90	24.79	317	0.428
154	13	17.46	34.72	4.55	0.22	8.25	150	17.65	34.74	25.18	280	0.579
210	18	16.20	34.65	4.70	0.32	8.25	200	16.42	34.65	25.39	260	0.716
317	8	14.62	34.54	4.53	0.38	8.15	300	14.93	34.58	25.68	232	0.969
417	8	11.92	34.33	4.21	0.73	8.10	400	12.46	34.36	26.02	200	1.195
516	8	9.24	34.15	3.80	2.31	8.00	500	9.68	34.18	26.39	165	1.386
616	8	7.00	34.05	2.93	1.19	7.90	600	7.33	34.07	26.65	140	1.547
834	8	4.58	34.18	1.30	3.36	7.70	800	4.82	34.15	27.04	103	1.807
1033	8	3.57	34.36	0.80	3.66	7.70	1000	3.68	34.34	27.32	77	2.003
1234	8	3.04	34.47	0.95	3.76	7.70	1200	3.12	34.47	27.47	63	2.161
1533	8	2.41	-	-	3.73	7.80	1500	2.46	34.52	27.56	54	2.359
1536	18	2.40	34.52	1.60	-	7.75						

		OBSERVED					INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
35		**SATSUMA; August 18, 1955; 1030–1215 GCT; 25°12'N, 157°30'E; 0705 02 279 07xx xxx2 2 x x 5000–1 x 1 x x.**										
0		28.3	35.05	4.41	0.00	8.35	0	28.3	35.05	22.37	548	0.000
15	15	28.37	34.92	4.47	0.08	8.35	10	28.40	34.96	22.26	559	0.055
30	15	27.91	35.70	4.44	0.00	8.35	25	28.14	35.14	22.48	538	0.138
54	15	24.24	35.19	5.14	0.08	8.35	50	25.30	35.19	23.41	449	0.261
100	15	19.89	34.90	5.20	0.00	8.35	100	19.89	34.90	24.73	323	0.455
148	15	17.72	34.72	4.69	0.10	8.35	150	17.70	34.72	25.15	282	0.608
216	28	16.60	34.60	4.71	0.17	8.30	200	16.81	34.69	25.34	264	0.748
308	28	15.28	34.60	4.51	0.22	8.20	300	15.43	34.61	25.58	242	1.008
402	28	13.51	34.45	4.38	0.35	8.20	400	13.61	34.45	25.86	215	1.246
498	28	10.73	34.24	4.16	0.49	8.10	500	10.67	34.24	26.27	176	1.452
595	28	7.69	34.07	3.49	0.60	8.00	600	7.54	34.07	26.62	143	1.621
849	31	4.36	34.16	1.32	–	7.75	800	4.77	34.11	27.02	105	1.887
1045	31	3.56	34.33	0.86	1.25	7.75	1000	3.67	34.29	27.28	81	2.089
1248	31	3.13	34.45	1.10	1.68	7.75	1200	3.22	34.42	27.42	67	2.256
1540	31	2.49	34.54	1.40	1.38	7.75	1500	2.54	34.52	27.55	54	2.461
36		**SATSUMA; August 18–19, 1955; 2230–0007 GCT; 25°00'N, 156°27'E; 0905 02 291 09x1 14x2 2 31–0 1 5500–1 x x x x.**										
0		29.0	35.08	4.42	0.00	8.35	0	29.0	35.08	22.14	570	0.000
10	7	29.0	34.99	4.42	0.00	8.35	10	29.0	34.99	22.08	576	0.057
25	7	28.69	34.94	4.67	0.00	8.35	25	28.69	34.94	22.16	568	0.143
50	7	26.74	35.26	4.86	0.00	8.35	50	26.74	35.26	23.02	486	0.275
98	7	22.37	35.10	4.61	0.08	8.30	100	22.18	35.10	24.27	367	0.490
147	7	19.88	34.92	4.67	0.13	8.30	150	19.72	34.92	24.79	317	0.663
218	6	17.67	34.89	4.41	0.10	8.20	200	18.18	34.89	25.17	281	0.815
318	6	15.66	34.76	4.51	0.22	8.20	300	16.07	34.79	25.59	241	1.083
418	6	13.19	34.51	4.26	0.51	8.15	400	13.78	34.56	25.92	209	1.319
532	5	9.69	34.20	3.93	1.09	8.00	500	10.68	34.27	26.29	174	1.521
631	5	7.39	34.05	3.28	1.32	7.90	600	8.00	34.09	26.58	147	1.691
829	5	4.96	34.20	1.43	2.04	7.80	800	5.18	34.16	27.01	106	1.962
1020	4	3.88	34.33	0.98	2.01	7.80	1000	3.91	34.31	27.26	83	2.168
1217	4	3.30	34.45	1.16	2.21	7.75	1200	3.34	34.43	27.42	67	2.338
1516	4	2.62	34.52	1.64	2.08	7.75	1500	2.65	34.52	27.55	55	2.546
37		**SATSUMA; August 19, 1955; 0800–0930 GCT; 25°00'N, 154°48'E; 0908 02 285 09x3 09x2 2 x 1 5500–1 x x x x.**										
0		28.8	34.85	4.48	0.00	8.40	0	28.80	34.85	22.05	578	0.000
10	8	28.92	34.78	4.30	0.00	8.40	10	28.92	34.78	21.94	589	0.058
25	8	28.56	34.78	4.47	0.00	8.40	25	28.56	34.78	22.08	576	0.146
50	8	23.94	34.96	5.14	0.00	8.40	50	23.94	34.96	23.64	426	0.271
99	8	20.87	34.96	5.04	0.00	8.30	100	20.83	34.96	24.52	343	0.465
149	8	18.87	34.85	4.82	0.00	8.30	150	18.82	34.85	24.97	300	0.628
218	4	17.12	34.74	4.54	0.14	8.30	200	17.50	34.76	25.23	275	0.774
318	4	15.72	34.72	4.57	0.21	8.25	300	16.00	34.72	25.55	244	1.041
417	4	13.80	34.49	4.35	0.36	8.20	400	14.21	34.54	25.81	220	1.283
516	4	10.87	34.25	4.11	1.09	8.10	500	11.41	34.29	26.16	187	1.497
616	4	8.08	34.07	3.60	1.52	8.00	600	8.46	34.09	26.51	153	1.677
801	6	5.16	34.11	1.67	2.08	7.90	800	5.18	34.11	26.97	110	1.958
1001	6	3.87	34.31	0.98	1.75	7.80	1000	3.90	34.31	27.26	83	2.168
1201	6	3.28	34.45	1.17	2.54	7.80	1200	3.29	34.43	27.43	66	2.337
1501	6	2.62	34.52	1.50	2.21	7.80	1500	2.62	34.52	27.56	54	2.540

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm³/g	dyn. m

SATSUMA; August 19, 1955; 1730-1915 GCT; 25°00'N, 153°20'E; 1605 00 281 16x2 00x1 1 x x 38
5500-1 x x.

0		29.1	35.14	4.50	0.00	8.40	0	29.1	35.14	22.16	568	0.000
10	0	29.32	35.03	4.32	0.00	8.35	10	29.32	35.03	22.01	582	0.057
25	0	28.53	35.10	4.49	0.00	8.35	25	28.53	35.10	22.31	554	0.143
50	0	24.84	34.94	5.02	0.00	8.35	50	24.84	34.94	23.36	454	0.269
95	0	20.81	34.89	4.80	0.00	8.35	100	20.60	34.89	24.55	340	0.469
145	0	19.10	34.90	4.31	0.00	8.35	150	18.97	34.89	24.97	300	0.631
212	5	17.15	34.72	4.29	0.16	8.30	200	17.50	34.74	25.22	276	0.778
311	5	15.67	34.61	4.41	0.35	8.25	300	15.81	34.63	25.51	248	1.047
410	5	13.31	34.43	4.24	0.62	8.20	400	13.63	34.47	25.86	215	1.288
510	5	10.03	-	4.06	0.95	8.15	500	10.39	34.33	26.39	165	1.488
610	5	7.22	34.04	3.67	1.22	8.00	600	7.46	34.05	26.62	143	1.650
818	13	4.86	34.15	1.49	2.01	7.90	800	5.01	34.13	27.00	107	1.917
1016	13	3.64	34.33	0.94	1.85	7.80	1000	3.71	34.31	27.29	80	2.120
1215	13	3.05	34.51	1.00	2.18	7.80	1200	3.09	34.49	27.49	61	2.279
1514	13	2.42	34.52	1.31	2.18	7.80	1500	2.43	34.52	27.58	52	2.471

SATSUMA; August 20, 1955; 0315-0535 GCT; 25°01'N, 151°57'E; 0710 02 284 07x2 00x1 2 31-0 1 39
5500-1 x x x x.

0		28.6	34.85	4.51	0.00	8.35	0	28.6	34.85	22.11	573	0.000
10	5	28.68	34.78	4.48	0.00	8.35	10	28.68	34.78	22.04	579	0.058
25	5	26.77	34.89	4.73	0.00	8.35	25	26.77	34.89	22.74	512	0.139
50	5	22.45	34.92	5.20	0.00	8.35	50	22.45	34.92	24.05	387	0.252
97	5	19.85	34.83	4.77	0.00	8.25	100	19.70	34.83	24.75	321	0.430
148	5	18.12	34.78	4.55	0.00	8.25	150	18.07	34.78	25.11	286	0.584
203	2	16.80	34.69	4.86	0.08	8.25	200	16.84	34.69	25.33	265	0.724
303	2	15.65	34.60	4.59	0.09	8.25	300	15.69	34.60	25.54	245	0.986
403	2	13.39	34.43	4.24	0.27	8.20	400	13.44	34.43	25.87	214	1.226
502	2	10.36	34.20	4.20	0.92	8.05	500	10.39	34.20	26.28	175	1.430
602	2	7.58	34.02	3.46	1.35	7.95	600	7.60	34.02	26.59	146	1.599
805	3	5.02	34.11	1.61	1.55	7.80	800	5.08	34.11	26.98	109	1.872
1005	3	3.81	34.25	-	1.91	7.75	1000	3.86	34.25	27.22	86	2.084
1205	3	3.15	34.42	1.04	1.38	7.75	1200	3.17	34.40	27.42	67	2.257
1504	3	2.44	34.51	1.37	1.48	7.80	1500	2.44	34.51	27.56	54	2.462
1985	5	1.88	34.58	2.27	2.04	7.85	2000	1.86	34.58	27.67	44	2.750
2480	5	1.70	34.72	2.66	2.27	7.85	2500	1.70	34.72	27.79	32	2.975
2980	5	1.56	34.63	2.96	1.68	7.95	3000	(1.53)	(34.63)	(27.74)	(37)	(3.202)

SATSUMA; August 20, 1955; 1200-1320 GCT; 25°00'N, 150°20'E; 0905 02 280 09x1 xxx1 1 x x 40
5500-1 x x x x.

0		28.7	34.85	4.64		8.35	0	28.7	34.85	22.08	576	0.000
15	8	28.95	34.70	4.42		8.35	10	28.92	34.72	21.89	594	0.058
30	8	27.38	34.89	4.69		8.35	25	28.59	34.85	22.11	573	0.146
55	8	22.66	34.81	5.45		8.30	50	23.12	34.83	23.79	412	0.269
103	8	20.19	34.89	5.09		8.30	100	20.31	34.89	24.61	334	0.457
153	8	18.19	34.76	4.80		8.25	150	18.30	34.78	25.07	290	0.615
206	25	16.96	34.69	4.44		8.10	200	17.09	34.69	25.28	270	0.758
298	25	15.39	34.60	4.58		8.10	300	15.31	34.60	25.61	239	1.019
392	25	13.28	34.42	4.29		8.10	400	13.01	34.40	25.94	207	1.252
486	25	10.56	34.22	4.16		8.10	500	10.12	34.18	26.31	172	1.451
584	25	7.89	34.05	3.52		7.95	600	7.50	34.02	26.59	146	1.619
845	26	4.40	34.16	1.25		7.80	800	4.79	34.16	27.06	102	1.885
1042	26	3.45	34.31	0.85		7.75	1000	3.61	34.31	27.30	79	2.082
1240	26	2.91	34.43	1.04		7.75	1200	3.00	34.42	27.44	65	2.244
1538	26	2.32	34.51	1.44		7.75	1500	2.43	34.49	27.55	55	2.446

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SATSUMA; August 20-21, 1955; 2345-0110 GCT; 24°55'N, 148°45'E; 0905 02 292 09x2 09x2 2 32-x 1 5500-1 x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.8	34.90	4.49		8.35	0	28.8	34.90	22.08	576	0.000
10	20	28.71	34.85	4.47		8.35	10	28.71	34.85	22.08	576	0.058
25	20	28.64	34.83	4.45		8.35	25	28.64	34.83	22.08	576	0.144
49	20	23.92	34.81	5.04		8.35	50	23.69	34.81	23.62	428	0.270
94	20	21.05	34.92	4.79		8.35	100	20.83	34.92	24.49	346	0.465
146	20	19.85	34.85	4.52		8.30	150	19.79	34.85	24.74	322	0.634
213	23	17.83	34.72	4.45		8.25	200	18.33	34.74	25.01	296	0.791
310	23	15.87	34.63	4.51		8.25	300	16.01	34.63	25.47	252	1.072
408	23	14.12	34.49	4.11		8.20	400	14.30	34.49	25.74	226	1.321
505	23	10.85	34.25	3.89		8.05	500	11.08	34.25	26.19	184	1.536
605	23	7.88	34.07	3.57		7.90	600	7.98	34.07	26.57	148	1.712
910	31	4.30	34.24	1.20		7.80	800	5.10	34.13	26.99	108	1.986
1110	31	3.28	34.40	1.03		7.70	1000	3.72	34.31	27.28	81	2.191
1294	31	2.91	34.45	1.17		7.70	1200	3.09	34.43	27.44	65	2.355
1580	31	2.32	34.51	1.55		7.70	1500	2.54	34.49	27.54	56	2.558

42

SATSUMA; August 21, 1955; 0900-1020 GCT; 24°54'N, 147°04'E; 0905 02 273 09x2 07x2 2 x x 5500-1 x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.0	34.69	4.50	0.00	8.35	0	28.0	34.69	22.19	565	0.000
10	6	28.14	34.65	4.42	0.00	8.35	10	28.14	34.65	22.10	574	0.057
25	6	28.20	34.85	4.43	0.00	8.35	25	28.20	34.85	22.24	560	0.142
50	6	26.26	34.83	4.82	0.00	8.35	50	26.26	34.83	22.84	503	0.275
87	6	21.62	34.85	5.08	0.00	8.35	100	21.10	34.85	24.38	356	0.491
146	6	19.42	34.85	4.36	0.00	8.30	150	19.31	34.85	24.84	312	0.660
210	4	17.69	34.70	4.57	0.16	8.30	200	17.89	34.72	25.11	286	0.813
308	4	16.09	34.63	4.44	0.29	8.30	300	16.20	34.63	25.44	255	1.090
407	4	13.68	34.47	4.10	0.42	8.20	400	13.90	34.49	25.84	217	1.336
506	4	10.47	34.22	3.83	0.73	8.10	500	10.66	34.24	26.27	176	1.542
605	4	8.29	34.13	3.51	0.87	7.95	600	8.37	34.13	26.56	149	1.715
855	22	4.60	34.15	1.66	-	7.80	800	5.10	34.11	26.98	109	1.991
1048	22	3.51	34.31	2.10	-	7.80	1000	3.73	34.25	27.24	84	2.200
1243	22	2.92	34.43	0.46	2.34	7.80	1200	3.00	34.42	27.44	65	2.367
1538	22	2.35	34.51	1.58	2.14	7.80	1500	2.43	34.51	27.56	54	2.567

43

SATSUMA; August 21, 1955; 1840-2015 GCT; 25°01'N, 145°30'E; 0905 01 270 09x2 09x2 2 x x 5500-1 x x x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.9	34.87	4.55	0.00	8.35	0	27.9	34.87	22.35	550	0.000
10	15	28.14	34.81	4.46	0.00	8.35	10	28.14	34.81	22.23	561	0.056
25	15	27.96	34.81	4.77	0.00	8.35	25	27.96	34.81	22.28	557	0.139
49	15	27.09	34.85	4.57	0.00	8.35	50	26.95	34.85	22.64	522	0.275
92	15	21.06	34.83	5.00	0.12	8.35	100	20.60	34.81	24.48	347	0.493
142	15	18.91	34.78	4.59	0.18	8.30	150	18.68	34.76	24.94	302	0.657
201	34	17.31	34.69	4.77	0.18	8.30	200	17.33	34.69	25.21	277	0.805
294	34	15.92	34.63	4.55	0.22	8.30	300	15.82	34.63	25.52	247	1.074
386	34	13.92	34.63	4.21	0.55	8.25	400	13.59	34.61	25.99	203	1.310
483	34	11.43	34.31	3.97	1.19	8.15	500	10.92	34.29	26.25	178	1.511
617	29	7.70	34.25	3.45	1.81	8.00	600	8.19	34.25	26.68	137	1.678
715	29	5.57	34.05	-	2.11	7.85	800	4.68	34.15	27.06	102	1.934
862	30	4.26	34.22	1.45	2.90	7.80	1000	3.50	34.31	27.31	78	2.129
1056	30	3.34	34.33	1.16	2.67	7.80	1200	3.05	34.40	27.42	67	2.242
1251	30	2.99	34.42	1.19	2.90	7.80	1500	2.53	34.49	27.54	56	2.498
1550	30	2.46	34.49	1.53	2.93	7.80						

OBSERVED							INTERPOLATED			COMPUTED			
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD	
m	≮°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	

SATSUMA; August 22, 1955; 0130-0250 GCT; 25°06'N, 144°36'E; 1508 02 284 16x2 09x2 2 x 1 44
5000-1 x x x x.

0		27.8	34.58	4.58	0.23	8.35	0	27.8	34.58	22.16	568	0.000	
15	10	27.83	34.56	4.52	0.00	8.35	10	27.83	34.56	22.14	570	0.057	
30	10	27.75	34.58	4.51	0.00	8.35	25	27.75	34.58	22.18	566	0.142	
55	10	24.75	34.81	4.40	0.00	8.35	50	26.49	34.78	22.74	512	0.277	
98	10	21.15	34.85	5.07	0.12	8.30	100	21.03	34.85	24.38	356	0.480	
145	10	19.48	34.79	4.67	0.14	8.30	150	19.37	34.79	24.79	317	0.666	
213	20	18.10	34.74	4.66	0.12	8.25	200	18.39	34.74	25.01	296	0.822	
307	20	16.07	34.63	4.45	0.30	8.25	300	16.24	34.63	25.44	255	1.104	
402	20	13.55	34.45	4.17	1.05	8.15	400	13.60	34.45	25.86	215	1.349	
498	20	11.43	34.31	4.01	1.12	8.10	500	11.38	34.31	26.19	184	1.559	
596	20	8.01	34.11	3.76	1.85	7.90	600	7.91	34.11	26.60	145	1.733	
850	43	4.31	34.18	2.02	2.41	7.80	800	4.60	34.11	27.04	103	1.998	
1031	43	3.48	34.34	1.05	2.64	7.75	1000	3.60	34.29	27.29	80	2.196	
1216	43	2.95	34.45	1.10	2.47	7.75	1200	3.01	34.43	27.45	64	2.358	
1511	43	2.45	34.49	1.46	2.37	7.75	1500	2.48	34.49	27.54	56	2.560	

SATSUMA; August 22, 1955; 0815-1255 GCT; 25°05'N, 143°28'E; 1803 01 282 18x1 03x2 2 26-15 1 45
3500-1 x x x x.

0		28.5	34.85	4.55	0.00	8.35	0	28.5	34.85	22.15	569	0.000	
10	3	28.44	34.65	4.52	0.00	8.35	10	28.44	34.65	22.02	581	0.057	
25	3	28.09	34.74	4.58	0.00	8.35	25	28.09	34.74	22.20	564	0.143	
50	3	23.89	34.74	5.16	0.00	8.30	50	23.89	34.74	23.50	440	0.269	
97	3	19.23	34.78	5.06	0.00	8.30	100	19.10	34.78	24.85	311	0.458	
147	3	17.65	34.78	4.67	0.08	8.30	150	17.59	34.78	25.23	275	0.606	
221	15	16.34	34.69	4.64	0.22	8.25	200	16.70	34.70	25.38	261	0.743	
316	15	14.78	34.58	4.44	0.44	8.25	300	15.05	34.58	25.65	235	0.998	
414	15	12.59	34.40	4.26	0.68	8.15	400	12.99	34.42	25.96	206	1.229	
511	15	9.53	34.20	3.79	1.22	8.10	500	9.95	34.22	26.37	167	1.425	
610	15	6.92	34.13	3.55	1.42	8.10	600	7.19	34.11	26.71	134	1.584	
825	17	4.35	34.18	1.53	2.04	7.85	800	4.50	34.16	27.09	99	1.833	
1027	15	3.40	34.36	1.14	2.31	7.75	1000	3.50	34.33	27.33	76	2.023	
1227	15	2.87	34.45	1.35	3.09	7.75	1200	2.92	34.45	27.47	63	2.180	
1527	15	2.28	34.54	1.74	2.37	7.80	1500	2.32	34.54	27.60	50	2.370	
1792	34	2.07	34.58	2.27	2.44	7.80	2000	2.00	34.60	27.67	44	2.647	
2292	34	1.82	34.61	2.67	2.24	7.80	2500	1.72	34.61	27.70	41	2.885	
2792	34	1.66	34.63	2.84	2.06	7.85	3000	(1.60)					

SATSUMA; August 22, 1955; 1715-1913 GCT; 26°00'N, 143°28'E; 0903 02 259 09x1 xxx1 2 x x 46
2500-1 x x x x.

0		26.9	34.27	4.49	0.00	8.35	0	26.9	34.27	22.21	563	0.000	
15	18	28.11	34.83	4.54	0.00	8.35	10	27.90	34.81	22.30	555	0.056	
30	18	26.48	34.85	4.82	0.00	8.35	25	27.00	34.85	22.63	523	0.137	
54	18	25.51	34.83	4.98	0.00	8.35	50	25.62	34.83	23.04	484	0.263	
95	18	19.68	34.81	5.12	0.00	8.35	100	19.43	34.79	24.76	320	0.465	
144	18	18.05	34.72	4.61	0.17	8.35	150	17.92	34.72	25.09	288	0.619	
180	45	17.50	34.70	4.68	0.17	8.25	200	17.22	34.69	25.24	274	0.762	
258	45	16.40	34.63	4.69	0.26	8.25	300	15.75	34.60	25.52	247	1.030	
340	45	14.93	34.58	4.33	0.58	8.25	400	13.39	34.47	25.91	210	1.268	
427	45	12.63	34.40	4.14	0.86	8.20	500	10.44	34.24	26.30	173	1.469	
523	45	9.75	34.18	4.09	1.19	8.15	600	7.83	34.11	26.62	143	1.636	
792	32	4.79	34.11	1.91	2.21	7.80	800	4.72	34.11	27.02	105	1.901	
978	32	3.75	34.27	1.12	2.44	7.75	1000	3.66	34.29	27.28	81	2.102	
1170	32	3.19	34.40	1.02	2.54	7.70	1200	2.98	34.42	27.44	65	2.266	
1497	43	2.38	34.52	1.50	2.31	7.70	1500	(2.36)	(34.52)	(27.58)	(52)	(2.462)	

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

47 SATSUMA; August 23, 1955; 0045-0205 GCT; 27°03'N, 142°58'E; 1803 02 292 18x1 11x1 5 41-0 1 4500-1 x x x.

0		28.7	34.94	4.53		8.35	0	28.7	34.94	22.15	569	0.000
10	11	28.11	34.89	4.55		8.35	10	28.11	34.89	22.29	556	0.056
25	11	27.73	34.89	4.59		8.35	25	27.73	34.89	22.42	543	0.139
50	11	23.48u	34.87	5.26		8.35	50	23.24	34.87	23.77	414	0.259
90	11	19.87	34.87	5.03		8.35	100	19.61	34.85	24.77	319	0.443
149	11	18.67	34.78	4.65		8.30	150	18.64	34.78	24.96	301	0.600
209	18	17.65	34.74	4.72		8.30	200	17.80	34.74	25.13	284	0.749
305	18	16.22	34.67	4.66		8.25	300	16.30	34.67	25.45	254	1.025
402	18	14.69	34.56	4.41		8.15	400	14.73	34.56	25.70	230	1.278
499	18	11.47	34.34	4.12		8.05	500	11.40	34.34	26.20	183	1.495
598	18	8.38	34.13	3.81		7.95	600	8.31	34.13	26.56	149	1.671
845	23	4.85	34.27	1.95		7.85	800	5.28	34.24	27.06	102	1.940
1039	23	3.59	34.34	1.10		7.75	1000	3.75	34.33	27.30	79	2.137
1235	23	3.06	34.43	1.11		7.70	1200	3.10	34.42	27.44	65	2.299
1535	23	2.43	34.52	1.50		7.70	1500	2.51	34.52	27.57	53	2.498

48 SATSUMA; August 23, 1955; 0800-0945 GCT; 28°00'N, 142°30'E; 1803 02 287 18x1 18x2 5 38-0 1 2000-1 x x x.

0		28.9	34.51	4.57	0.00	8.35	0	28.9	34.51	21.75	607	0.000
10	6	27.97	34.51	4.56	0.00	8.35	10	27.97	34.51	22.06	578	0.092
25	6	27.11	34.49	4.87	0.00	8.35	25	27.11	34.49	22.32	553	0.144
50	6	26.53	34.42	4.66	0.00	8.35	50	26.53	34.42	22.45	540	0.281
98	6	21.40	34.83	4.70	0.10	8.35	100	21.25	34.83	24.32	362	0.508
148	6	19.48	34.85	4.69	0.22	8.35	150	19.42	34.85	24.82	314	0.679
208	14	18.47	34.81	4.68	0.22	8.30	200	18.60	34.83	25.01	296	0.834
305	14	16.76	34.70	4.67	0.26	8.30	300	16.87	34.70	25.33	264	1.122
403	14	14.56	34.56	4.33	0.45	8.20	400	14.62	34.56	25.73	227	1.378
502	14	12.99	34.43	4.15	0.71	8.15	500	13.00	34.43	25.96	206	1.606
601	14	10.38	34.27	3.85	1.19	8.00	600	10.44	34.27	26.32	171	1.806
840	18	4.97	34.16	1.99	2.37	7.80	800	5.47	34.15	26.97	110	2.107
1040	18	3.62	-	1.12	1.94	7.70	1000	3.80	34.29	27.26	83	2.316
1240	18	3.16	34.43	1.12	2.80	7.70	1200	3.22	34.42	27.44	66	2.484
1540	18	2.52	34.51	1.40	2.47		1500	2.62	34.51	27.55	55	2.689

49 SATSUMA; August 23, 1955; 1600-1735 GCT; 29°00'N, 142°15'E; 2510 81 262 25x2 14x2 1 x x 3500-1 x x x x.

0		27.2	34.92	4.68	0.00	8.35	0	27.2	34.92	22.61	525	0.000
10	17	27.47	34.72	4.63	0.00	8.35	10	27.47	34.72	22.38	547	0.054
25	17	27.05	34.76	4.66	0.00	8.35	25	27.05	34.76	22.54	532	0.134
49	17	26.07	34.76	4.79	0.00	8.35	50	25.99	34.76	22.88	499	0.264
97	17	21.38	34.85	5.06	0.08	8.30	100	21.23	34.85	24.34	360	0.480
148	17	19.48	34.81	4.73	0.12	8.30	150	19.44	34.81	24.78	318	0.651
201	35	18.90	34.79	4.68	0.25	8.30	200	18.91	34.79	24.90	306	0.810
292	35	17.34	34.72	4.75	0.23	8.25	300	17.21	34.72	25.27	271	1.106
385	35	16.10	34.63	4.54	0.34	8.20	400	15.83	34.61	25.50	249	1.377
480	35	13.42	34.49	4.27	0.99	8.10	500	12.88	34.45	26.01	201	1.614
577	35	10.86	34.29	3.95	1.25	8.00	600	10.32	34.25	26.33	170	1.810
807	28	5.71	34.09	2.62	1.42	7.80	800	5.84	34.09	26.87	119	2.120
985	28	4.22	34.24	1.49	2.47	7.75	1000	4.19	34.24	27.19	89	2.346
1170	28	3.37	34.38	1.24	2.87	7.75	1200	3.29	34.40	27.40	69	2.524
1460	28	2.68	34.49	1.22	2.53	7.75	1500	(2.60)	(34.49)	(27.54)	(56)	(2.735)

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	⊀°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SATSUMA; August 23-24, 1955; 2330-0100 GCT; 30°08'N, 141°46'E; 2306 63 242 23x1 14x2 2 17-0 50
1 4500-1 x x x x.

0		26.7	34.42	4.66	0.00	8.35	0	26.7	34.42	22.40	545	0.000
20	14	27.07	34.47	4.58	0.00	8.35	10	26.96	34.43	22.32	553	0.055
30	14	26.63	34.51	4.63	0.00	8.35	25	26.91	34.49	22.38	547	0.137
54	14	25.50	34.61	4.80	0.12	8.35	50	25.69	34.60	22.85	502	0.269
100	14	21.27	34.83	4.78	0.08	8.30	100	21.27	34.83	24.32	362	0.485
148	14	19.53	34.81	4.74	0.13	8.30	150	19.50	34.81	24.77	319	0.657
227	36	18.08	34.76	4.66	0.34	8.25	200	18.49	34.78	25.00	297	0.813
315	36	16.32	34.67	4.51	0.39	8.25	300	16.68	34.69	25.38	261	1.099
403	36	14.47	34.52	4.19	1.25	8.20	400	14.53	34.54	25.74	226	1.354
494	36	11.63	34.34	3.84	1.52	8.10	500	11.48	34.34	26.19	184	1.570
589	36	9.08	34.24	3.23	1.85	8.00	600	8.85	34.24	26.56	149	1.746
840	45	5.09	34.22	1.90	1.61	7.85	800	5.49	34.20	27.01	106	2.020
1022	45	3.68	34.27	1.16	2.47	7.75	1000	3.81	34.25	27.22	86	2.228
1211	45	3.09	34.40	0.85	3.00	7.70	1200	3.08	34.42	27.44	65	2.397
1500	45	2.53	34.36	0.95	1.78	7.70	1500	2.53	34.36	27.46	64	2.611

SATSUMA; August 24, 1955; 0700-0830 GCT; 31°04'N, 141°15'E; 1410 02 270 14x2 27x2 2 27-0 1 51
3500-1 x x x x.

0		27.1	34.49	4.66	0.00	8.35	0	27.1	34.49	22.32	553	0.000
15	17	26.81	34.51	4.65	0.00	8.35	10	26.94	34.51	22.39	546	0.055
30	17	25.46	34.43	4.82	0.00	8.35	25	26.21	34.43	22.55	531	0.136
54	17	21.03	34.78	5.18	0.00	8.35	50	21.40	34.78	24.25	368	0.248
95	17	18.80	34.76	5.17	0.08	8.30	100	18.68	34.76	24.94	302	0.417
144	17	17.56	34.72	4.54	0.09	8.30	150	17.41	34.72	25.22	276	0.563
212	34	16.68	34.67	4.58	0.23	8.25	200	16.80	34.67	25.34	264	0.701
293	34	15.68	34.61	4.29	0.29	8.20	300	15.55	34.60	25.56	244	0.962
374	34	13.37	34.47	3.93	0.48	8.15	400	12.42	34.42	26.06	196	1.192
457	34	10.87	34.33	-	1.32	8.10	500	9.82	34.24	26.41	163	1.380
550	34	8.45	34.18	3.55	1.68	8.00	600	7.39	34.16	26.73	132	1.536
633	57	6.82	34.16	2.75	2.41	7.90	800	4.67	34.11	27.03	104	1.788
794	57	4.71	34.11	2.55	2.41	7.80	1000	3.79	34.29	27.27	82	1.989
955	57	3.91	34.25	1.12	2.70	7.75	1200	3.08	34.38	27.41	68	2.157
1214	57	3.01	34.38	0.85	2.67	7.75						

SATSUMA; August 24, 1955; 1400-1540 GCT; 32°00'N, 140°50'E; 1606 25 261 16x1 xxxx 1 x x 52
2500-1 x x x.

0		26.7	34.40	4.63	0.00	8.35	0	26.7	34.40	22.39	546	0.000
10	0	26.76	34.31	4.60	0.00	8.35	10	26.76	34.31	22.29	556	0.055
25	0	25.70	34.25	4.78	0.00	8.35	25	25.70	34.25	22.59	527	0.136
50	0	22.33	34.63	5.05	0.00	8.35	50	22.33	34.63	23.86	406	0.253
102	0	19.10	34.76	4.86	0.21	8.35	100	19.20	34.76	24.81	315	0.435
147	0	17.69	34.72	4.80	0.38	8.30	150	17.59	34.72	25.18	280	0.585
208	4	16.38	34.65	4.33	0.60	8.30	200	16.51	34.67	25.39	260	0.723
307	4	14.21	34.51	4.19	0.69	8.30	300	14.32	34.52	25.76	225	0.972
406	4	11.40	34.33	4.01	1.00	8.25	400	11.63	34.34	26.16	187	1.187
506	4	8.55	34.09	3.87	0.52	8.15	500	8.78	34.11	26.48	156	1.367
606	4	6.25	34.04	3.20	-	8.00	600	6.35	34.04	26.78	128	1.516
830	12	4.18	34.16	1.54	-	7.80	800	4.35	34.15	27.09	99	1.758
1027	12	3.54	34.31	1.03	-	7.80	1000	3.62	34.27	27.26	83	1.955
1226	12	2.94	34.42	0.86	-	7.80	1200	3.04	34.40	27.42	67	2.123
1525	12	2.46	34.49	1.29	-	7.70	1500	2.55	34.49	27.54	56	2.330

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	≮°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
53												
SATSUMA; August 24, 1955; 2100-2200 GCT; 33°03'N, 140°22'E; 1110 02 256 11x2 09x2 2 x 1 1035-1 x x x x.												
0		26.6	34.34	4.61		8.35	0	26.6	34.34	22.37	548	0.000
15	16	26.86	34.40	4.61		8.35	10	26.83	34.38	22.32	553	0.055
30	16	26.79	34.43	4.65		8.35	25	26.81	34.42	22.35	550	0.138
54	16	24.49	34.45	4.97		8.35	50	25.00	34.45	22.95	492	0.268
106	16	17.82	34.74	5.31		8.30	100	18.12	34.72	25.05	292	0.465
155	16	16.73	34.69	4.67		8.25	150	16.80	34.69	25.34	264	0.606
205	16	16.22	34.65	4.49		8.25	200	16.28	34.65	25.44	255	0.739
306	16	14.76	34.56	4.37		8.15	300	14.88	34.56	25.67	233	0.990
405	16	11.78	34.36	3.96		8.15	400	11.93	34.38	26.14	188	1.210
497	23	9.82	34.22	3.75		8.10	500	9.78	34.20	26.39	165	1.395
589	23	7.45	34.07	3.59		8.00	600	7.19	34.05	26.66	139	1.556
772	23	5.25	34.04	2.52		7.90	800	5.08	34.07	26.96	111	1.823
965	23	4.57	34.34	1.34		7.80	1000	(4.49)	(34.42)	(27.29)	(80)	(2.032)
54												
SATSUMA; August 25, 1955; 0400-0700 GCT; 33°57'N, 140°45'E; 0921 03 254 09x5 09x2 2 27-15 1 2500-1 x x x x.												
0		26.4	34.36	4.82	0.00	8.35	0	26.4	34.36	22.44	541	0.000
10	25	26.65	34.38	4.88	0.00	8.35	10	26.65	34.38	22.38	547	0.054
24	25	26.67	34.38	4.73	0.00	8.35	25	26.63	34.38	22.39	546	0.136
48	25	23.15	34.61	5.27	0.00	8.35	50	22.80	34.61	23.72	419	0.257
92	25	19.99	34.72	4.32	0.08	8.30	100	19.79	34.72	24.63	332	0.446
140	25	19.15	34.76	4.59	0.23	8.30	150	18.99	34.76	24.86	310	0.608
231	29	16.64	34.63	4.28	0.29	8.25	200	17.69	34.69	25.14	283	0.760
328	29	13.25	34.47	3.95	0.58	8.15	300	14.31	34.54	25.78	223	1.019
425	29	10.80	34.40	3.46	0.68	8.05	400	11.41	34.42	26.26	177	1.228
524	29	8.00	34.20	3.22	0.80	7.95	500	8.66	34.24	26.59	146	1.397
623	29	6.87	34.22	2.55	1.05	7.90	600	6.97	34.20	26.82	124	1.540
870	47	3.98	34.34	1.55	1.35	7.80	800	4.68	34.31	27.19	89	1.769
1064	47	3.20	34.40	1.33	1.68	7.80	1000	3.37	34.38	27.38	71	1.943
1260	47	2.75	34.47	1.23	2.93	7.80	1200	2.97	34.45	27.47	63	2.094
1555	47	2.26	34.54	1.43	2.64	7.80	1500	2.38	34.51	27.56	54	2.292

OBSERVATIONS OF THE JAPAN METEOROLOGICAL AGENCY

OBSERVED								INTERPOLATED			COMPUTED			
Z m	W ±	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

RYOFU MARU; August 13, 1955; 1840-1930 GCT; 34°48'N, 140°53'E; 0911 02 259 09 x x 0942 3 x x x 05-18 2 4 x x. 448

0		26.6	34.04	4.78	0	26.6	34.04	22.14	570	0.000
10	5	26.72	34.07	4.88	10	26.70	34.07	22.13	571	0.057
25	5	26.78	34.09	4.97	25	26.80	34.09	22.12	572	0.142
50	5	24.66	34.36	4.87	50	24.65	34.36	22.99	489	0.275
75	5	23.61	34.47	4.72	75	23.60	34.47	23.38	451	0.393
95	5	21.46	34.65	4.41	100	21.25	34.67	24.20	373	0.497
155	5	18.85	34.78	4.21	150	19.10	34.76	24.82	314	0.671
210	5	16.03	34.65	4.59	200	16.50	34.67	25.40	259	0.792
330	5	11.33	34.43	3.65	300	12.50	34.49	26.11	192	1.024
460	5	6.87	34.25	3.63	400	8.90	34.34	26.63	142	1.199

RYOFU MARU; August 14, 1955; 0100-0135 GCT; 34°34'N, 141°17'E; 2203 80 261 22 x x 0742 3 30-12 2 x 05-08 2 4 x x. 449

0		26.9	34.36	4.81	0	26.9	34.36	22.30	555	0.000
9	30	26.96	34.31	4.82	10	26.95	34.31	22.23	561	0.055
24	30	26.75	34.36	4.79	25	26.75	34.36	22.34	551	0.139
48	30	25.42	34.27	4.90	50	25.25	34.31	22.77	510	0.272
71	30	22.82	34.70	4.55	75	22.70	34.72	23.83	408	0.387
93	30	21.88	34.81	4.47	100	21.60	34.81	24.21	372	0.486
133	30	20.29	34.79	4.29	150	19.85	34.78	24.65	330	0.664
170	30	19.33	34.76	4.77	200	17.75	34.67	25.10	287	0.821
207	30	17.42	34.65	4.31						

RYOFU MARU; August 14, 1955; 0630-0710 GCT; 34°58'N, 141°28'E; 0911 02 267 09 x x 0742 3 32-01 2 x 2 4 x x. 450

0		27.6	34.05	4.63	0	27.6	34.05	21.84	599	0.000
10		27.46	-	4.63	10	27.45	34.07	21.90	593	0.059
25		27.34	34.09	4.71	25	27.35	34.09	21.95	588	0.148
50		25.88	34.11	6.63	50	25.90	34.11	22.41	544	0.290
74		24.06	34.34	4.67	75	24.05	34.36	23.17	471	0.417
98		22.40	34.76	4.54	100	22.35	34.76	23.95	397	0.527
152		20.44	34.79	4.28	150	20.50	34.79	24.49	346	0.715
206		17.12	34.67	3.99	200	17.55	34.69	25.16	282	0.875
315		13.08	34.47	3.88	300	13.70	34.51	25.89	212	1.129

RYOFU MARU; August 14, 1955; 1230-1315 GCT; 35°47'N, 141°29'E; 0816 01 262 08 x x 0743 3 x x x 02-20 2 4 x x. 451

0		27.0	34.04	4.83	0	27.0	34.04	22.01	582	0.000
10	7	27.08	33.98	4.71	10	27.10	33.98	21.96	587	0.058
25	7	26.78	34.11	4.76	25	26.80	34.11	22.13	571	0.134
50	7	25.47	34.27	4.87	50	25.45	34.27	22.68	518	0.271
75	7	22.31	34.60	4.70	75	22.30	34.60	23.85	407	0.387
95	7	19.81	34.81	4.33	100	19.50	34.79	24.76	320	0.479
139	7	16.94	34.65	4.22	150	16.40	34.63	25.40	259	0.603
186	7	14.80	34.60	4.10	200	13.90	34.54	25.87	214	0.724
283	7	8.86	34.18	3.94						

JMA

NORPAC

	OBSERVED								INTERPOLATED			COMPUTED		
	Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Si μg at/L	Tot. P. μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
452	RYOFU MARU; August 14, 1955; 2130-2225 GCT; 37°00'N, 141°30'E; 0218 01 233 02 x x 0643 3 22-03 3 206-2 20-10 2 4 x x.													
	0		23.4	33.80	4.74				0	23.4	33.80	22.92	495	0.000
	9	30	22.68	33.82	5.43				10	22.50	33.82	23.20	469	0.049
	22	30	21.39	33.84	5.70				25	20.80	33.86	23.70	421	0.116
	43	30	17.95	33.96	5.80				50	17.30	33.96	24.76	320	0.209
	65	30	16.08	33.93	5.92				75	14.35	33.98	25.35	264	0.285
	87	30	12.36	34.05	5.91				100	11.55	34.00	25.92	210	0.345
	130	30	9.68	33.87	5.58									
453	RYOFU MARU; August 15, 1955; 0037-0200 GCT; 36°53'N, 141°52'E; 0420 02 236 02 x x 0643 3 20-10 3 621-2 07-15 2 4 x x.													
	0		23.8	33.82	5.26				0	23.8	33.82	22.83	504	0.000
	10	7	23.74	33.82	5.36				10	23.75	33.82	22.84	502	0.050
	25	7	15.50	33.84	6.23				25	15.50	33.84	24.99	298	0.110
	50	7	13.50	34.00	5.71				50	13.50	34.00	25.64	236	0.178
	74	7	13.02	34.38	4.54				75	12.80	34.36	25.96	206	0.233
	117	19	8.32	33.77	5.77				100	10.15	34.00	26.16	187	0.283
	175	19	8.56	34.25	3.39				150	8.45	34.04	26.47	157	0.370
	231	19	7.46	34.24	2.93				200	8.05	34.25	26.70	135	0.445
	342	19	2.68	33.71	3.72				300	4.55	33.91	26.88	118	0.578
	474	24	2.86	33.71	3.55				400	2.80	33.71	26.90	117	0.698
	590	24	3.00	34.07	1.36				500	2.90	33.80	26.96	111	0.815
	705	24	3.00	34.15	1.02				600	3.00	34.07	27.16	92	0.920
									700	3.00	34.15	27.23	85	1.014
454	RYOFU MARU; August 15, 1955; 0630-0810 GCT; 36°53'N, 142°26'E; 0318 02 253 03 x x 0944 3 22-10 2 x 02-60 2 4 x x.													
	0		27.2	34.04	4.78				0	27.2	34.04	21.95	588	0.000
	11	17	27.31	34.05	4.85				10	27.30	34.05	21.94	589	0.058
	26	17	27.20	34.09	4.85				25	27.20	34.09	22.00	583	0.145
	49	17	23.86	34.29	4.84				50	26.00	34.31	23.19	470	0.277
	73	17	24.29	34.58	4.71				75	24.10	34.58	23.32	457	0.394
	97	17	21.91	34.65	4.66				100	21.75	34.65	24.05	388	0.500
	150	30	17.49	34.61	4.21				150	17.50	34.61	25.11	287	0.671
	201	30	16.13	34.61	4.24				200	16.15	34.61	25.44	255	0.809
	301	30	14.00	34.51	3.98				300	14.00	34.51	25.83	218	1.053
	388	30	9.70	34.25	3.52				400	8.90	34.20	26.53	152	1.245
	454	30	5.29	33.96	3.50				500	5.15	34.07	26.95	112	1.383
	595	30	4.88	34.27	1.97				600	4.80	34.27	27.14	94	1.491
	657	30	4.22	34.31	1.75				700	3.80	34.31	27.27	81	1.584
	810	30	2.74	34.34	1.65				800	2.85	34.34	27.40	69	1.664
455	RYOFU MARU; August 15, 1955; 1225-1340 GCT; 36°47'N, 143°08'E; 0320 01 244 03 x x 0744 3 x x x 04-17 2 4 x x.													
	0		26.9	34.47	4.75				0	26.9	34.47	22.37	548	0.000
	10	12	27.04	34.51	4.74				10	27.05	34.51	22.36	549	0.055
	24	12	27.02	34.54	4.79				25	26.85	34.54	22.45	540	0.137
	49	12	24.05	34.63	5.27				50	23.90	34.63	23.41	449	0.261
	73	12	21.40	34.69	5.48				75	21.25	34.69	24.21	372	0.364
	98	12	19.80	34.72	5.43				100	19.75	34.72	24.63	332	0.453
	178	18	17.75	34.76	4.85				150	18.50	34.76	24.98	299	0.613
	237	18	17.02	34.79	4.99				200	17.50	34.78	25.24	274	0.759
	356	18	15.82	34.69	4.24				300	16.40	34.74	25.49	250	1.029
	475	18	12.91	34.45	4.09				400	14.75	34.60	25.74	227	1.277
	595	18	9.53	34.33	3.54				500	12.25	34.43	26.12	191	1.498
	714	18	5.98	33.96	3.49				600	9.40	34.31	26.53	152	1.682
	834	18	4.32	34.02	2.50				700	6.30	34.00	26.75	131	1.834
	953	18	3.86	34.15	1.57				800	4.80	34.00	26.93	114	1.966
	1192	18	3.25	34.33	1.08				1000	3.70	34.18	27.19	89	2.186
	1431	18	2.77	34.43	1.06				1200	3.20	34.42	27.42	67	2.358

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	*°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

RYOFU MARU; August 15, 1955; 2100-2320 GCT; 36°28'N, 144°05'E; 0217 02 243 02 x x 0543 3 31-10 2 x 18-20 1 2 4 x x. 456

0		26.6	34.38	4.83	0.17	2.9	0	26.6	34.38	22.40	545	0.000
11	10	26.73	34.34	4.84	0.23	5.2	10	26.70	34.34	22.34	551	0.055
27	10	26.76	34.40	4.80	0.28	2.1	25	26.75	34.40	22.37	548	0.137
52	10	25.33	34.45	5.05	0.12	1.4	50	25.35	34.45	22.84	503	0.269
80	10	23.82	34.54	4.87	0.23	1.5	75	24.05	34.52	23.29	460	0.390
106	10	22.74	34.69	4.77	0.42	1.8	100	22.95	34.65	23.70	421	0.501
138	32	21.61	34.78	4.62	0.33	1.8	150	21.30	34.76	24.25	368	0.701
183	32	20.45	34.74	4.66	0.44	2.2	200	20.00	34.74	24.58	337	0.880
274	32	18.12	34.70	5.06	0.33	1.8	300	17.75	34.70	25.19	279	1.196
365	32	16.85	34.69	5.12	0.53	-	400	16.60	34.69	25.39	260	1.476
456	32	16.20	34.67	4.73	0.56	2.3	500	15.05	34.60	25.68	232	1.735
547	32	13.87	34.51	4.20	0.93	2.9	600	12.45	34.42	26.07	195	1.963
638	32	11.41	34.34	4.13	1.26	-	700	9.75	34.27	26.44	160	2.155
729	32	8.94	34.24	3.57	1.68	-	800	7.50	34.18	26.72	134	2.315
928	32	4.88	34.09	2.64	2.35	5.0	1000	4.60	34.15	27.06	101	2.571
1328	29	3.26	34.34	1.12	2.71	6.0	1200	3.80	34.27	27.25	83	2.775
1563	29	2.70	34.43	0.91	2.71	6.1	1500	2.90	34.42	27.45	64	3.022
1798	29	2.43	34.51	1.20	2.71	6.0	2000	2.20	34.56	27.63	47	3.349
2038	29	2.16	34.56	1.54	2.57	5.9						
2278	29	2.02	34.60	1.91	2.40	5.5						

RYOFU MARU; August 16, 1955; 0600-0740 GCT; 37°23'N, 144°05'E; 3108 03 249 31 x x 0543 3 31-01 2 x 11-20 2 4 x x. 457

0		27.2	34.49	4.76	0	27.2	34.49	22.30	555	0.000
10	3	27.08	34.47	4.76	10	27.10	34.47	22.31	554	0.055
25	3	26.95	34.49	4.71	25	26.95	34.49	22.37	548	0.138
50	3	23.42	34.58	5.08	50	23.40	34.58	23.51	439	0.262
75	3	21.67	34.72	4.66	75	21.65	34.72	24.13	380	0.365
100	3	20.49	34.78	4.85	100	20.50	34.78	24.47	348	0.457
165	5	18.07	34.74	4.73	150	18.60	34.74	24.94	303	0.622
220	5	17.02	34.72	4.88	200	17.40	34.72	25.23	275	0.769
330	5	15.76	34.61	4.57	300	16.10	34.63	25.47	252	1.040
440	5	12.83	34.43	4.13	400	13.90	34.51	25.84	217	1.284
549	5	9.86	34.27	3.86	500	11.20	34.34	26.25	178	1.493
657	5	7.13	34.13	3.48	600	8.55	34.20	26.58	147	1.667
765	5	5.03	34.00	3.01	700	6.30	34.07	26.80	126	1.813
870	5	4.90	34.27	2.02	800	5.00	34.09	26.98	109	1.939
1075	5	3.28	34.31	1.05	1000	3.85	34.29	27.26	82	2.147
1280	5	2.68	34.34	1.03	1200	2.90	34.33	27.38	71	2.307

RYOFU MARU; August 16, 1955; 1535-1640 GCT; 38°31'N, 144°10'E; 0305 00 219 03 x x 0542 3 x x x 09-13 2 4 x x. 458

0		22.6	33.40	5.33	0	22.6	33.40	22.86	501	0.000
10	0	21.94	33.35	5.47	10	21.95	33.35	23.00	488	0.049
25	0	11.59	33.78	7.18	25	11.60	33.78	25.79	222	0.103
50	0	8.78	33.77	6.12	50	8.80	33.77	26.20	183	0.154
75	0	5.33	33.53	6.17	75	5.35	33.53	26.50	154	0.196
100	0	3.24	33.39	6.43	100	3.25	33.39	26.60	145	0.234
150	4	1.76	33.35	6.48	150	1.75	33.35	26.69	136	0.305
200	4	1.47	33.39	5.67	200	1.45	33.39	26.74	132	0.373
300	4	1.98	33.64	4.12	300	2.00	33.64	26.90	108	0.493
400	4	2.40	33.82	2.89	400	2.40	33.82	27.01	106	0.601
500	4	2.86	33.98	1.77	500	2.85	33.98	27.11	97	0.705
600	4	3.14	34.11	1.29	600	3.15	34.11	27.19	89	0.801
700	4	2.96	34.20	1.02	700	3.00	34.20	27.27	81	0.890
800	4	2.76	34.29	0.99	800	2.75	34.29	27.36	73	0.972
1000	4	2.65	34.34	0.98	1000	2.65	34.34	27.41	68	1.124
1200	4	2.44	34.49	1.19	1200	2.45	34.49	27.54	56	1.260

JMA

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
459	RYOFU MARU; August 17, 1955; 0330-0425 GCT; 37°22'N, 145°52'E; 2019 81 250 20 x x 1342 3 28-02 2 x 14-34 2 4 x x.												
0		26.8	34.02	4.66				0	26.8	34.02	22.07	577	0.000
10	2	26.84	34.11	4.66				10	26.85	34.11	22.12	572	0.057
25	2	26.62	-	4.71				25	26.60	a)	a)	a)	a)
50	2	24.22	34.43	4.71				50	24.20	34.43	23.18	471	0.266
75	2	21.46	34.70	4.30				75	21.45	34.70	24.17	376	0.373
100	2	19.26	34.85	4.74				100	19.25	34.85	24.85	311	0.459
138	39	17.45	34.72	4.26				150	17.15	34.70	25.27	271	0.607
181	39	16.62	34.69	4.14				200	16.20	34.65	25.45	254	0.741
258	39	14.92	34.58	4.36				300	13.60	34.49	25.90	211	0.981
328	39	12.71	34.43	3.99				400	9.70	34.29	26.47	157	1.173
393	39	10.16	34.36	3.91				500	4.60	33.71	26.72	134	1.325
450	39	6.46	33.78	5.25				600	2.50	33.59	26.82	124	1.458
500	39	4.62	33.71	4.90									
538	39	3.98	33.73	4.35									
554	39	1.61	33.48	4.89									
612	39	2.71	33.62	4.11									
460	RYOFU MARU; August 17, 1955; 1235-1330 GCT; 36°52'N, 147°37'E; 2317 01 257 23 x x 1142 3 x x x 11-30 2 4 x x.												
0		26.3	34.40	4.76				0	26.3	34.40	22.50	536	0.000
10	11	26.48	34.34	4.76				10	26.50	34.34	22.40	545	0.054
25	11	25.71	34.42	4.82				25	25.70	34.42	22.70	516	0.133
49	11	22.92	34.78	4.93				50	22.85	34.78	23.81	410	0.250
74	11	20.70	34.79	5.19				75	20.65	34.79	24.45	349	0.345
98	11	19.24	34.81	4.63				100	19.15	34.81	24.86	310	0.428
130	31	17.93	34.76	4.72				150	17.45	34.74	25.22	276	0.576
176	31	16.75	34.72	4.99				200	16.20	34.69	25.49	250	0.710
280	31	14.34	34.54	4.32				300	13.60	34.51	25.90	211	0.948
380	31	10.67	34.34	4.89				400	10.05	34.29	26.41	163	1.144
485	31	7.11	34.09	3.58				500	6.45	34.02	26.74	132	1.299
592	31	2.12	33.64	4.09				600	2.25	33.71	26.95	112	1.425
697	31	4.46	34.13	2.04				700	4.45	34.13	27.06	101	1.536
803	31	3.79	34.22	1.47				800	3.80	34.22	27.20	88	1.638
1017	31	3.15	34.36	1.05				1000	3.20	34.34	27.37	72	1.812
461	RYOFU MARU; August 17, 1955; 2135-2240 GCT; 37°41'N, 147°06'E; 2116 03 247 21 x x 2342 3 24-05 3 x 09-08 2 4 x x.												
0		24.0	33.71	5.06				0	24.0	33.71	22.69	517	0.000
10	16	23.97	33.77	5.00				10	23.95	33.77	22.74	513	0.052
24	16	12.23	33.22	7.72				25	11.80	33.22	25.26	272	0.110
49	16	5.69	33.12	7.48				50	5.55	33.12	26.14	189	0.168
74	16	2.99	33.15	6.93				75	2.90	33.15	26.44	160	0.212
99	16	1.40	33.17	7.04				100	1.40	33.17	26.57	148	0.252
155	28	1.32	33.31	6.57				150	1.30	33.31	26.70	135	0.324
207	28	1.33	33.39	6.41				200	1.35	33.37	26.73	133	0.393
313	28	3.39	33.77	3.94				300	3.15	33.71	26.87	119	0.522
414	28	2.56	33.80	2.95				400	2.70	33.80	26.98	109	0.638
516	28	4.17	34.15	1.86				500	3.95	34.09	27.09	98	0.744
616	28	3.93	34.27	1.48				600	4.00	34.25	27.21	87	0.841
716	28	3.61	34.33	1.26				700	3.65	34.33	27.30	79	0.929
822	28	3.34	34.36	1.18				800	3.40	34.36	27.36	73	1.011
1027	28	2.82	34.40	1.26				1000	2.90	34.38	27.42	67	1.163
1233	28	2.54	34.45	1.04				1200	2.60	34.43	27.49	61	1.303

a) No interpolation made.

OBSERVED								INTERPOLATED			COMPUTED			JMA
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD	NORPAC
m	⁎°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	

RYOFU MARU; August 18, 1955; 0330-0430 GCT; 37°23'N, 146°55'E; 2118 02 259 21 x x 2242 3 25-15 2 x 11-40 2 4 x x. 462

0		24.3	33.78	4.97	0	24.3	33.78	22.65	521	0.000
10	15	24.28	33.84	5.09	10	24.30	33.84	22.70	516	0.052
24	15	18.85	34.04	6.19	25	18.70	34.05	24.39	355	0.117
48	15	15.15	34.34	5.25	50	15.00	34.33	25.47	252	0.193
72	15	12.58	34.20	4.96	75	12.45	34.20	25.90	211	0.252
97	15	11.31	34.24	4.51	100	11.05	34.25	26.21	182	0.301
150	43	6.84	33.93	4.94	150	6.85	33.93	26.62	143	0.383
195	43	7.03	34.07	3.68	200	6.50	34.07	26.77	129	0.452
281	43	5.48	34.09	2.69	300	4.90	34.11	27.00	107	0.574
365	43	2.86	34.15	4.81	400	3.05	34.11	27.20	88	0.674
469	43	3.38	34.04	1.77	500	3.65	34.16	27.18	90	0.766
528	43	3.85	34.27	1.54	600	3.85	34.25	27.23	85	0.858
610	43	3.83	34.25	1.42	700	3.40	34.24	27.26	82	0.946
718	43	3.31	34.24	1.19	800	3.20	34.29	27.32	77	1.030
861	43	3.15	34.34	1.07	1000	2.90	34.38	27.42	67	1.186
1043	43	2.79	34.40	1.04						

RYOFU MARU; August 13, 1955; 0900-1040 GCT; 36°49'N, 146°41'E; 2017 02 258 20 x x 2243 3 x x x 11-40 2 4 x x. 463

0		26.8	33.98	4.70	0	26.8	33.98	22.04	579	0.000
11	12	26.97	34.07	4.63	10	26.95	34.07	22.06	578	0.058
26	12	26.96	34.05	4.91	25	26.95	34.05	22.05	579	0.145
50	12	26.94	34.24	4.70	50	26.95	34.24	22.19	565	0.288
75	12	24.60	34.09	4.86	75	24.60	34.09	22.80	507	0.423
99	12	23.11	34.11	4.77	100	23.00	34.13	23.29	460	0.544
147	30	18.08	34.74	4.72	150	18.00	34.74	25.10	287	0.733
193	30	17.08	34.69	4.83	200	16.95	34.69	25.30	268	0.875
285	30	15.66	34.61	4.46	300	15.25	34.56	25.60	240	1.137
374	30	13.28	34.29	4.71	400	12.45	34.29	25.97	205	1.369
456	30	10.59	34.31	4.04	500	9.30	34.15	26.42	162	1.552
538	30	8.20	34.14	3.60	600	6.25	34.05	26.80	126	1.704
620	30	5.64	34.04	3.12	700	3.60	33.89	26.96	111	1.829
698	30	3.62	33.89	3.02	800	3.30	33.95	27.04	103	1.941
853	30	3.12	33.98	1.65	1000	3.50	34.25	27.26	82	2.141
1009	30	3.48	34.27	1.23						

RYOFU MARU; August 18, 1955; 1530-1640 GCT; 36°16'N, 146°09'E; 1720 02 255 20 x x 2243 3 x x x 23-10 2 4 x x. 464

0		26.6	34.52	4.76	0	26.6	34.52	22.51	535	0.000
10	10	26.68	34.56	4.63	10	26.70	34.56	22.50	536	0.054
25	10	26.55	34.56	4.59	25	26.55	34.56	22.55	531	0.134
50	10	23.44	34.65	4.97	50	23.45	34.65	23.56	434	0.255
76	10	20.73	34.78	4.53	75	20.85	34.78	24.39	355	0.354
102	10	19.39	34.74	5.09	100	19.50	34.74	24.71	325	0.440
180	4	17.47	34.69	4.54	150	18.20	34.70	25.01	296	0.597
240	4	16.64	34.67	4.80	200	17.20	34.69	25.25	273	0.742
360	4	14.83	34.58	4.29	300	15.75	34.63	25.55	245	1.008
480	4	11.82	34.42	4.04	400	13.80	34.52	25.88	213	1.247
600	4	8.72	34.15	3.64	500	11.30	34.38	26.26	177	1.453
720	4	5.52	34.05	3.14	600	8.70	34.15	26.51	154	1.629
840	4	4.20	33.98	2.36	700	6.05	34.04	26.80	126	1.779
960	4	3.88	34.20	1.54	800	4.65	33.96	26.91	116	1.909
1200	4	3.23	34.31	1.17	1000	3.75	34.22	27.21	87	2.129
1440	4	2.73	34.45	0.98	1200	3.25	34.31	27.33	76	2.309

JMA

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	*°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

465 RYOFU MARU; August 18, 1955; 2130-2300 GCT; 35°44'N, 146°37'E; 1813 03 252 18 x x 2222 3 31-00 2-3 x 23-23 2 4 x x.

0		25.6	34.16	4.97	0	25.6	34.16	22.55	531	0.000
10	3	25.51	34.18	4.84	10	25.50	34.18	22.59	527	0.053
25	3	23.96	34.13	5.17	25	23.95	34.13	23.01	487	0.129
50	3	22.67	34.29	5.40	50	22.65	34.29	23.51	439	0.245
75	3	17.36	34.31	5.77	75	17.35	34.31	24.91	306	0.339
100	3	13.78	34.20	5.28	100	13.80	34.20	25.63	237	0.407
145	52	12.12	34.40	4.46	150	11.85	34.36	26.15	188	0.515
197	52	9.61	34.09	4.71	200	9.55	34.09	26.34	170	0.607
230	52	8.78	34.16	4.52	300	5.85	33.86	26.69	136	0.764
250	52	7.21	33.89	5.05	400	4.65	33.80	26.78	128	0.900
277	52	6.37	33.93	4.89	500	4.20	33.95	26.95	112	1.024
323	52	5.33	33.77	4.79						
360	52	4.88	33.77	4.82						
508	52	4.14	33.95	2.66						

466 RYOFU MARU; August 19, 1955; 0300-0550 GCT; 35°35'N, 147°19'E; 1511 03 267 15 x x 2222 3 25-03 2 x 03-27 2 4 x x.

0		27.0	34.29	4.78	0	27.0	34.29	22.20	564	0.000
10	3	26.59	34.24	4.68	10	26.60	34.24	22.30	555	0.056
25	3	26.08	–	4.83	25	26.10				
50	3	23.36	34.63	5.02	50	23.35	34.63	23.57	433	0.254
75	3	20.90	34.67	4.90	75	20.90	34.67	24.29	365	0.354
100	3	18.25	34.61	4.50	100	18.25	34.61	24.93	304	0.439
133	48	16.04	34.56	4.50	150	15.20	34.58	25.63	237	0.576
167	48	14.55	34.52	4.07	200	13.35	34.43	25.90	211	0.690
218	48	12.72	34.40	3.93	300	9.95	34.36	26.48	156	0.879
271	48	11.08	34.51u	4.26	400	5.60	33.82	26.69	136	1.030
312	48	9.05	34.09	4.50	500	4.00	33.77	26.82	124	1.164
302	55	9.88	34.36	4.11	600	4.10	33.87	26.90	117	1.288
360	55	6.58	33.89	4.68						
414	55	5.29	33.80	4.53						
469	55	4.08	33.73	4.32						
521	55	3.95	33.80	3.60						
628	55	4.13	33.89	3.12						

467 RYOFU MARU; August 19, 1955; 1230-1315 GCT; 35°05'N, 48°08'E; 1613 02 259 16 x x 1721 3 x x x 05-40 2 4 x x.

0		27.0	34.65	4.61	0	27.0	34.65	22.48	537	0.000
10	0	26.84	34.63	4.59	10	26.85	34.63	22.51	535	0.054
25	0	26.56	34.63	4.65	25	26.55	34.63	22.60	526	0.131
50	0	22.04	34.76	5.31	50	22.05	34.76	24.05	388	0.245
75	0	20.19	34.76	5.36	75	20.20	34.76	24.54	341	0.337
100	0	18.54	34.74	5.23	100	18.55	34.74	24.96	301	0.418
153	20	17.32	34.72	5.02	150	17.40	34.72	25.22	276	0.564
204	20	16.80	34.70	4.99	200	16.85	34.70	25.34	265	0.702
305	20	16.46	34.69	4.87	300	16.45	34.69	25.42	257	0.970
407	20	14.70	34.60	4.46	400	14.80	34.60	25.72	229	1.223
507	20	12.24	34.43	4.09	500	12.40	34.45	26.10	192	1.445
608	20	9.82	34.24	4.68	600	10.00	34.25	26.39	165	1.636
707	20	7.17	34.07	3.76	700	7.35	34.09	26.68	137	1.798
806	20	4.88	33.93	3.40	800	5.00	33.95	26.86	120	1.936
1003	20	3.96	34.16	1.50	1000	3.95	34.16	27.15	92	2.166
1212	20	3.31	34.33	1.00	1200	3.30	34.31	27.32	77	2.354

OBSERVED							
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L

INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δT 10^{-5} cm^3/g	ΔD dyn. m

RYOFU MARU; August 19, 1955; 2100-2225 GCT; 36°14'N, 148°16'E; 1710 02 262 18 x x 1731 3 26-02 2 x 11-25 2 4 x x. 468

Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L
0		25.5	34.18	4.94			
10	0	25.60	34.18	4.84			
25	0	24.20	34.20	5.12			
50	0	22.66	34.29	5.07			
75	0	17.92	34.40	6.06			
100	0	14.49	34.45	5.85			
165	3	11.68	34.36	5.04			
220	3	9.44	34.16	4.59			
330	3	5.09	33.78	5.17			
440	3	4.46	33.87	3.61			
550	3	3.93	34.00	2.34			
660	3	3.83	34.13	1.70			
770	3	3.43	34.20	1.31			
880	3	3.42	34.36	1.25			
1100	3	2.80	34.42	1.03			
1320	3	2.50	34.49	1.04			

Z m	T °C	S ‰	σ_t g/L	δT 10^{-5} cm^3/g	ΔD dyn. m
0	25.5	34.18	22.60	526	0.000
10	25.60	34.18	22.57	529	0.053
25	24.20	34.20	23.00	488	0.129
50	22.65	34.29	23.51	439	0.245
75	17.90	34.40	24.86	310	0.339
100	14.50	34.45	25.68	232	0.408
150	12.30	34.38	26.07	195	0.516
200	10.25	34.22	26.31	173	0.610
300	6.25	33.89	26.66	139	0.770
400	4.65	33.84	26.81	125	0.906
500	4.15	33.93	26.94	113	1.028
600	3.90	34.05	27.06	101	1.140
700	3.65	34.15	27.16	92	1.242
800	3.40	34.24	27.26	82	1.336
1000	3.10	34.40	27.42	67	1.500
1200	2.70	34.45	27.50	60	1.644

RYOFU MARU; August 20, 1955; 0330-0425 GCT; 36°48'N, 147°56'E; 1919 03 265 19 x x 1731 3 33-12 2 x 13-10 2 4 x x. 469

Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L
0		26.8	33.86	4.47			
10	15	26.53	33.84	4.66			
25	15	26.43	34.24	4.71			
50	15	23.05	34.36	4.85			
75	18	19.10	34.65	4.13			
100	18	17.62	34.67	4.09			
137	40	16.10	34.61	4.77			
184	40	14.78	34.56	4.23			
270	40	12.29	34.45	3.92			
351	40	9.75	34.29	3.31			
435	40	6.25	33.98	4.10			
525	40	4.06	33.82	3.69			
666	40	4.13	34.51	4.13			
1003	40	3.32	34.16	1.41			
1263	40	2.64	34.42	0.98			

Z m	T °C	S ‰	σ_t g/L	δT 10^{-5} cm^3/g	ΔD dyn. m
0	26.8	33.86	21.95	588	0.000
10	26.55	33.84	22.00	583	0.059
25	26.45	34.24	22.33	552	0.144
50	23.05	34.36	23.46	444	0.269
75	19.10	34.65	24.74	322	0.365
100	17.60	34.67	25.13	285	0.442
150	16.00	34.60	25.46	253	0.578
200	14.30	34.54	25.79	222	0.700
300	11.35	34.40	26.26	177	0.906
400	7.70	34.11	26.63	142	1.072
500	4.65	33.86	26.83	123	1.210
600	4.10				
700	4.05				
800	3.80				
1000	3.30	34.16	27.21	87	
1200	2.80	34.36	27.41	68	

RYOFU MARU; August 20, 1955; 0925-1020 GCT; 37°35'N, 147°54'E; 1814 01 259 18 x x 2231 3 x x x 07-40 2 4 x x. 470

Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L
0		26.0	33.95	4.85			
10	16	26.08	33.95	5.50			
24	16	23.61	34.40	5.08			
48	16	19.13	34.70	5.01			
71	16	17.00	34.67	5.01			
95	16	15.98	34.63	4.22			
149	38	13.66	34.51	4.18			
202	52	11.91	34.36	4.20			
238	52	10.38	34.27	3.99			
315	52	8.39	34.20	3.58			
390	52	5.61	33.95	3.82			
461	52	5.03	34.05	2.84			
533	52	4.05	34.02	2.43			
610	52	3.21	33.98	2.70			
685	52	4.13	34.24	1.09			
829	52	3.38	34.25	1.15			
1026	52	2.96	34.36	1.29			

Z m	T °C	S ‰	σ_t g/L	δT 10^{-5} cm^3/g	ΔD dyn. m
0	26.0	33.95	22.26	558	0.000
10	26.10	33.95	22.23	561	0.056
25	23.45	34.42	23.38	451	0.139
50	18.95	34.70	24.82	314	0.235
75	16.85	34.67	25.31	268	0.309
100	15.75	34.61	25.53	247	0.374
150	13.65	34.51	25.90	211	0.490
200	11.90	34.36	26.13	190	0.592
300	9.10	34.22	26.51	154	0.770
400	5.50	33.96	26.82	124	0.914
500	4.50	34.04	26.99	104	1.034
600	3.30	33.98	27.07	100	1.142
800	3.05	34.25	27.31	78	1.344
1000	3.00	34.34	27.38	71	1.504

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471

RYOFU MARU; August 20, 1955; 2130-2225 GCT; 36°33'N, 149°21'E; 1817 03 254 18 x x 2242 3 32-12 2 x 00-00 2 4 x x.

Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L
0		24.5	34.20	4.86			
10	18	24.36	34.24	4.94			
26	18	22.91	34.20	5.12			
51	18	16.03	34.40	6.33			
77	18	13.21	34.36	4.98			
103	18	11.89	34.34	4.85			
138	53	10.49	34.25	4.98			
185	53	8.76	34.11	5.04			
284	53	5.16	33.86	4.68			
380	53	4.29	33.91	3.29			
474	53	4.14	34.02	2.26			
565	53	3.94	34.13	1.65			
655	53	3.75	34.20	1.38			
744	53	3.58	34.27	1.28			
940	53	3.04	34.34	1.01			
1121	53	2.71	34.42	0.98			

Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	24.5	34.20	22.90	497	0.000
10	24.35	34.24	22.99	489	0.049
25	22.95	34.20	23.36	453	0.120
50	16.25	34.40	25.25	273	0.211
75	13.45	34.36	25.82	219	0.273
100	12.05	34.34	26.10	192	0.325
150	10.05	34.22	26.35	169	0.417
200	8.20	34.07	26.53	152	0.499
300	5.00	33.86	26.80	126	0.642
400	4.25	33.93	26.93	114	0.766
500	4.10	34.05	27.04	103	0.879
600	3.85	34.16	27.16	92	0.982
700	3.65	34.24	27.24	84	1.075
800	3.40	34.29	27.30	79	1.162
1000	2.90	34.36	27.40	69	1.322

472

RYOFU MARU; August 21, 1955; 0330-0600 GCT; 36°07'N, 150°23'E; 2023 01 270 20 x x 2042 3 31-13 2 x 08-38 2 4 x x.

Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L
0		26.7	34.29	4.81			
10	23	26.68	34.43	4.81			
26	23	25.87	34.36	4.93			
52	23	21.81	34.67	4.87			
77	23	20.12	34.76	4.57			
102	23	18.80	34.74	4.58			
173	59	16.56	34.61	4.70			
180	59	16.04	34.61	4.52			
306	59	10.36	34.20	4.67			
359	59	8.25	34.00	4.11			
411	59	5.60	33.80	4.79			
463	59	5.07	33.89	4.31			
582	59	4.00	33.98	2.38			
661	59	3.96	34.11	2.25			

Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	26.7	34.29	22.30	555	0.000
10	26.70	34.43	22.40	545	0.055
25	25.95	34.36	22.60	526	0.135
50	22.10	34.65	23.97	395	0.251
75	20.25	34.76	24.53	342	0.344
100	18.90	34.74	24.86	310	0.426
150	17.35	34.63	25.16	282	0.576
200	15.15	34.54	25.61	239	0.709
300	10.65	34.22	26.25	178	0.924
400	6.15	33.84	26.64	141	1.090
500	4.75	33.91	26.86	120	1.226
600	4.00	34.02	27.02	105	1.344

473

RYOFU MARU; August 21, 1955; 0900-1200 GCT; 35°40'N, 150°58'E; 1821 02 265 18 x x 2133 3 x x x 09-15 1 2 4 x x.

Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L
0		26.7	34.43	4.85	0.23	22	
11	11	26.68	34.43	4.78	0.15	22	
25	11	25.67	34.43	5.43	0.17	19	
50	11	21.91	34.70	4.99	0.17	26	
75	11	20.96	34.78	4.64	0.26	19	
99	11	20.11	34.79	4.77	0.30	21	
141	48	19.14	34.78	4.84	0.26	28	
180	48	17.92	34.70	4.92	0.30	19	
265	48	16.78	34.67	4.98	0.35	26	
349	48	16.28	34.74	5.18	0.23	28	
438	48	14.38	-	-	-	-	
507	48	12.04	34.36	4.27	1.09	27	
583	48	9.94	34.27	3.70	1.17	35	
600	61	9.51	34.25	3.61	1.40	59u	
647	61	7.96	34.18	2.86	1.56	55	
672	61	7.26	34.15	3.69	1.63	51	
708	61	5.86	34.02	3.62	2.17u	58	
752	61	4.94	33.96	3.44	2.40	61	
788	61	4.86	34.00	3.01	2.23	58u	
820	61	4.48	34.05	2.53	-	71	

Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	26.7	34.43	22.41	544	0.000
10	26.70	34.43	22.41	544	0.054
25	25.65	34.43	22.73	514	0.134
50	21.90	34.70	24.04	388	0.247
75	20.95	34.78	24.36	358	0.341
100	20.10	34.79	24.60	335	0.428
150	18.90	34.76	24.88	308	0.591
200	17.70	34.70	25.14	284	0.742
300	16.55	34.70	25.41	258	1.020
400	15.20	34.61	25.65	235	1.277
500	12.30	34.38	26.07	195	1.505
600	9.50	34.25	26.48	156	1.692
700	6.20	34.05	26.80	126	1.843
800	4.75	34.02	26.95	112	1.971

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RYOFU MARU; August 21, 1955; 1540-1640 GCT; 35°10'N, 151°31'E; 1918 03 263 19 x x 2133 3 x x x 11-06 2 4 x x. 474

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		26.9	34.52	4.63				0	26.9	34.52	22.41	544	0.000
10	12	26.78	34.51	4.55				10	26.80	34.51	22.43	542	0.054
25	12	26.77	34.51	4.64				25	26.75	34.51	22.45	540	0.136
51	12	23.99	34.60	5.18				50	24.10	34.60	23.33	456	0.261
76	12	21.53	34.69	5.39				75	21.65	34.69	23.96	396	0.368
102	12	20.02	34.76	5.28				100	20.15	34.76	24.56	339	0.460
160	22	18.42	34.74	5.03				150	18.70	34.74	24.91	306	0.624
212	22	17.36	34.70	5.00				200	17.60	34.70	25.17	281	0.773
315	22	16.64	34.69	5.64				300	16.75	34.69	25.35	264	1.053
419	22	15.68	34.60	4.61				400	15.85	34.61	25.51	249	1.320
524	22	13.44	34.45	4.07				500	13.90	34.49	25.83	218	1.566
631	22	10.50	34.29	3.87				600	11.85	34.33	26.12	191	1.785
736	22	7.34	34.05	-				700	8.45	34.13	26.54	151	1.969
851	22	4.81	33.95	-				800	5.95	34.00	26.79	127	2.119
1086	22	3.94	34.18	-				1000	4.25	34.09	27.06	101	2.367
1320	22	3.20	34.34	-				1200	3.60	34.16	27.18	90	2.579

RYOFU MARU; August 21, 1955; 2140-2245 GCT; 35°51'N, 151°32'E; 1616 03 262 16 x x 1433 3 39-16 2 x 11-16 2 4 x x. 475

0		26.7	34.43	4.96				0	26.7	34.43	22.41	544	0.000
10	14	26.78	34.49	4.81				10	26.80	34.49	22.41	544	0.054
24	14	26.77	34.49	4.77				25	26.55	34.49	22.50	536	0.135
49	14	21.74	34.70	5.00				50	21.70	34.70	24.10	383	0.251
73	14	20.64	34.78	4.69				75	20.55	34.78	24.47	348	0.343
97	14	19.87	34.79	4.66				100	19.75	34.79	24.69	327	0.428
160	49	17.89	34.67	5.07				150	18.20	34.69	25.00	297	0.581
205	49	17.04	34.65	5.12				200	17.15	34.65	25.22	276	0.727
290	49	16.19	34.65	4.71				300	15.85	34.63	25.52	248	0.997
375	49	13.77	-	-				400	12.75	34.52	26.10	192	1.227
450	49	10.82	34.34	4.89				500	9.25	34.24	26.50	154	1.409
520	49	8.65	34.18	3.72				600	6.80	34.05	26.73	133	1.561
580	49	7.01	34.09	3.55				700	5.15	34.05	26.93	114	1.693
636	49	6.40	34.24	2.59				800	4.15	34.16	27.12	96	1.805
738	49	4.42	34.09	2.04									
844	49	3.99	34.20	1.40									

RYOFU MARU; August 22, 1955; 0300-0440 GCT; 36°26'N, 151°48'E; 2013 01 268 20 x x 1433 3 27-24 2 x 12-11 2 4 x x. 476

0		25.5	33.96	4.96				0	25.5	33.96	22.53	533	0.000
12	15	23.72	34.22	5.12				10	24.05	34.18	23.03	485	0.051
26	15	21.23	34.24	5.44				25	21.50	34.24	23.86	411	0.118
50	15	14.65	34.27	5.18				50	14.65	34.27	25.50	249	0.201
74	15	12.64	34.25	4.53				75	12.55	34.25	25.92	210	0.259
99	15	11.63	34.24	4.61				100	11.55	34.24	26.10	192	0.309
130	32	9.70	34.04	4.90				150	8.75	34.04	26.42	162	0.399
171	32	7.80	34.02	4.20				200	7.00	33.96	26.63	142	0.477
259	32	5.31	33.87	3.99				300	4.60	33.82	26.80	126	0.613
344	32	3.82	33.75	3.88				400	3.95	33.93	26.96	111	0.734
471	32	4.08	34.15	2.21				500	4.00	34.16	27.14	94	0.840
595	32	3.80	34.24	1.47				600	3.80	34.24	27.22	86	0.934
720	32	3.44	34.25	1.17				700	3.50	34.25	27.27	81	1.022
845	32	2.96	34.33	0.93				800	3.15	34.31	27.34	75	1.105
1093	32	2.64	34.42	1.01				1000	2.75	34.38	27.44	65	1.257
1342	32	2.31	34.49	1.25				1200	2.50	34.45	27.51	59	1.393

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OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	*°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

477 RYOFU MARU; August 22, 1955; 0930-1015 GCT; 37°10'N, 151°52'E; 1910 00 258 19 x x 3043 3 x x x 32-10 2 4 x x.

0		24.8	33.86	4.96	0	24.8	33.86	22.56	530	0.000
10	17	24.76	33.80	4.97	10	24.75	33.80	22.53	533	0.053
24	17	22.62	33.73	5.16	25	22.35	33.75	23.20	469	0.128
49	17	15.74	34.24	5.85	50	15.60	34.24	25.27	271	0.221
74	17	11.98	34.24	4.61	75	11.90	34.24	26.04	198	0.280
99	17	10.72	34.13	4.72	100	10.65	34.13	26.18	185	0.329
171	34	7.62	33.98	4.70	150	8.50	34.02	26.45	159	0.416
221	34	6.15	33.89	4.74	200	6.80	33.93	26.63	142	0.493
319	34	4.36	33.84	3.48	300	4.70	33.84	26.81	125	0.629
422	34	3.87	34.00	2.48	400	4.00	33.96	26.98	109	0.749
516	34	4.27	34.11	1.85	500	4.20	34.09	27.06	101	0.857
610	34	3.89	34.20	1.50	600	3.95	34.18	27.16	92	0.958
715	34	3.24	34.24	1.11	700	3.30	34.24	27.26	82	1.050
821	34	3.15	34.29	1.17	800	3.15	34.27	27.31	78	1.135
1031	34	2.84	34.40	1.06	1000	2.90	34.38	27.42	67	1.275
1241	34	2.48	34.45	1.11	1200	2.55	34.43	27.50	60	1.415

478 RYOFU MARU; August 22, 1955; 1540-1640 GCT; 36°44'N, 152°32'E; 1517 02 250 15 x x 3043 3 x x x 27-04 2 4 x x.

0		25.1	33.87	5.11	0	25.1	33.87	22.49	537	0.000
10	14	25.15	33.84	4.89	10	25.15	33.84	22.45	540	0.054
24	14	21.41	33.98	5.68	25	21.10	34.00	23.72	419	0.126
49	14	13.60	34.33	4.85	50	13.50	34.33	25.79	222	0.206
73	14	11.74	34.24	4.81	75	11.65	34.24	26.09	193	0.258
97	14	10.48	34.27	4.60	100	10.35	34.25	26.32	172	0.304
163	26	7.62	34.00	4.61	150	8.15	34.05	26.53	152	0.387
224	26	7.07	34.16	3.15	200	7.30	34.09	26.69	136	0.460
327	26	4.02	33.87	3.26	300	4.80	33.95	26.89	117	0.590
431	26	3.94	34.02	2.25	400	3.95	33.98	27.00	107	0.706
535	26	3.43	34.13	1.53	500	3.60	34.09	27.12	96	0.812
640	26	3.76	34.25	1.41	600	3.65	34.20	27.20	88	0.908
745	26	3.43	34.38	1.17	700	3.55	34.33	27.31	78	0.996
850	26	3.06	34.47	1.05	800	3.25	34.42	27.42	67	1.074
1055	26	2.70	34.49	0.95	1000	2.80	34.49	27.51	59	1.210
1270	26	2.40	34.49	1.12	1200	2.50	34.49	27.54	56	1.338

479 RYOFU MARU; August 22, 1955; 2100-2235 GCT; 36°18'N, 153°03'E; 1517 03 255 15 x x 2143 3 27-09 2 x 00-00 2 4 x x.

0		25.1	33.95	5.04	0	25.1	33.95	22.54	532	0.000
10	2	23.82	33.82	5.01	10	23.80	33.82	22.83	504	0.052
25	2	22.91	33.98	5.24	25	22.90	33.98	23.21	468	0.125
50	2	15.82	34.16	5.63	50	15.80	34.16	25.17	281	0.219
75	2	12.48	34.27	4.52	75	12.50	34.27	25.95	207	0.280
100	2	10.63	34.11	5.04	100	10.65	34.11	26.17	186	0.330
157	19	8.72	34.13	3.99	150	8.95	34.13	26.47	157	0.417
210	19	5.56	33.80	5.10	200	6.15	33.86	26.65	140	0.493
315	19	4.34	34.05	3.46	300	4.50	34.02	26.97	110	0.621
421	19	3.63	33.95	2.64	400	3.80	33.96	27.00	107	0.733
528	19	3.95	34.16	1.64	500	3.70	34.11	27.12	97	0.839
635	19	3.37	34.22	1.33	600	3.50	34.20	27.22	86	0.935
742	19	3.38	34.31	1.14	700	3.40	34.27	27.29	80	1.023
849	19	3.13	34.33	1.13	800	3.25	34.33	27.35	74	1.105
1056	19	2.68	34.42	1.04	1000	2.80	34.40	27.44	65	1.257
1258	19	2.60	34.49	1.18	1200	2.60	34.47	27.52	58	1.393

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^5 cm^3/g	dyn. m

RYOFU MARU; August 23, 1955; 0328-0421 GCT; 35°54'N, 153°38'E; 1918 16 263 19 x x 2143 3 33-12 2 x 07-11 2 4 x x. 480

0		26.0	33.93	5.02				0	26.0	33.93	22.25	559	0.000
10	14	25.84	33.93	4.82				10	25.85	33.93	22.30	555	0.056
25	14	22.18	33.95	5.32				25	22.20	33.95	23.39	450	0.131
50	14	15.60	34.31	5.22				50	15.60	34.31	25.32	267	0.221
76	14	13.02	34.31	4.57				75	13.10	34.31	25.86	215	0.282
101	14	11.48	34.31	4.60				100	11.55	34.31	26.16	187	0.332
168	42	8.26	34.02	4.37				150	9.15	34.09	26.40	164	0.421
218	42	4.74	33.68	5.46				200	6.00	33.80	26.63	142	0.499
327	42	4.10	33.80	4.09				300	4.25	33.77	26.80	126	0.635
430	42	3.96	33.95	2.73				400	4.00	33.91	26.94	113	0.757
535	42	4.25	34.13	1.95				500	4.15	34.07	27.05	102	0.868
636	42	3.88	34.22	1.43				600	4.00	34.18	27.16	92	0.970
736	42	3.53	34.27	1.08				700	3.65	34.25	27.25	83	1.062
834	42	3.27	34.33	1.14				800	3.35	34.31	27.32	77	1.148
1025	42	2.88	34.42	0.99				1000	2.90	34.40	27.43	66	1.304
1225	42	2.60	34.45	-				1200	2.65	34.45	27.50	60	1.444

RYOFU MARU; August 23, 1955; 2130-2340 GCT; 33°37'N, 154°58'E; 1323 03 265 13 x x 1543 3 39-20 1 x 10-12 1 2 4 x x. 481

0		26.8	34.42	4.93	0.07		1.9	0	26.8	34.42	22.37	548	0.000
10	20	26.78	34.42	4.99	0.09		-	10	26.80	34.42	22.37	548	0.055
25	20	26.76	34.42	4.83	0.09		-	25	26.75	34.42	22.38	547	0.137
50	20	25.34	34.49	5.02	0.12		-	50	25.35	34.49	22.87	500	0.268
75	20	22.12	34.70	5.08	0.14		1.8	75	22.10	34.70	24.00	392	0.380
100	20	20.70	34.76	5.16	0.15		1.7	100	20.70	34.76	24.41	353	0.474
183	44	17.90	34.78	-	0.29		2.3	150	19.00	34.78	24.86	310	0.642
235	44	17.03	34.76	5.17	0.29		1.4	200	17.60	34.78	25.31	268	0.789
343	44	15.98	34.67	4.63	0.51		1.7	300	16.35	34.70	25.47	252	1.057
450	44	13.52	34.56	4.29	0.79		2.7	400	14.60	34.61	25.79	222	1.304
556	44	10.40	34.47	3.68	1.51		3.0	500	12.05	34.40	26.14	189	1.526
660	44	5.42	33.84	4.91	1.77		3.7	600	8.30	34.05	26.50	154	1.714
767	44	4.33	33.91	3.31	2.33		4.5	700	5.00	33.86	26.79	127	1.863
869	44	4.18	34.13	2.02	2.63		4.7	800	4.30	33.98	26.96	111	1.989
1093	44	3.50	34.33	1.28	2.54		5.6	1000	3.80	34.24	27.22	86	2.201
1059	57	3.65	34.29	1.31	2.45		5.5	1200	3.20	34.38	27.40	69	2.373
1267	57	3.00	34.40	1.01	2.96		5.4	1500	2.55	34.49	27.53	57	2.589
1484	57	2.57	34.49	1.08	2.89		5.6						
1698	57	2.30	34.52	1.32	3.06u		5.7						
1915	57	2.07	34.56	1.66	2.85		5.5						

RYOFU MARU; August 24, 1955; 0330-0435 GCT; 34°02'N, 155°43'E; 1321 02 272 13 x x 1543 3 27-21 2 x 11-25 2 4 x x. 482

0		26.6	34.38	4.77				0	26.6	34.38	22.40	545	0.000
11	15	26.56	34.33	4.76				10	26.55	34.33	22.38	547	0.055
28	15	26.17	34.34	4.79				25	26.25	34.34	22.49	537	0.136
54	15	22.21	34.43	5.70				50	22.85	34.42	23.56	434	0.258
80	15	19.66	34.61	4.41				75	20.15	34.58	24.42	352	0.357
106	15	18.50	34.61	4.57				100	18.30	34.61	24.92	305	0.440
162	33	16.89	34.70	4.37				150	17.25	34.69	25.24	274	0.587
214	33	15.63	34.70	4.49				200	16.00	34.70	25.55	245	0.720
322	33	11.87	34.40	4.52				300	12.65	34.45	26.06	196	0.948
430	33	7.12	33.96	4.95				400	8.45	34.09	26.51	154	1.130
645	33	5.30	33.89	1.49				500	6.55	33.95	26.67	138	1.283
753	33	4.05	34.15	1.82				600	5.70	33.91	26.76	130	1.424
865	33	3.90	34.15	1.99				700	4.65	34.02	26.96	111	1.512
1092	33	3.11	34.33	1.16				800	4.00	34.15	27.13	95	1.662
1330	33	2.78	34.43	0.92				1000	3.45	34.25	27.27	81	1.854
								1200	2.95	34.38	27.41	68	2.018

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OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	⁄°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
483	RYOFU MARU; August 24, 1955; 0900-1025 GCT; 34°31'N, 156°26'E; 0918 25 258 09 x x 1534 3 x x x 11-04 2 4 x x.												
0		25.1	34.25	5.04				0	25.1	34.25	22.77	510	0.000
10	4	24.61	34.22	5.09				10	24.60	34.22	22.90	497	0.050
25	4	22.97	34.27	5.25				25	22.95	34.27	23.41	449	0.122
50	4	16.66	34.43	5.02				50	16.65	34.43	25.19	279	0.213
75	4	15.18	34.51	4.29				75	15.20	34.51	25.57	243	0.279
100	4	12.17	34.27	4.71				100	12.15	34.27	26.02	200	0.335
165	9	9.02	34.15	4.95				150	9.75	34.18	26.37	167	0.428
220	9	7.82	34.07	4.45				200	8.25	34.09	26.54	151	0.509
330	9	5.24	34.07	3.89				300	5.95	34.07	26.85	121	0.649
440	9	4.18	34.00	2.84				400	4.55	34.02	26.97	110	0.768
550	9	4.00	34.11	1.86				500	4.10	34.05	27.04	103	0.878
660	9	3.80	34.25	-				600	3.90	34.18	27.17	91	0.980
770	9	3.61	34.33	1.28				700	3.75	34.27	27.25	83	1.073
879	9	3.13	34.36	1.08				800	3.50	34.33	27.32	77	1.159
1098	9	2.72	34.43	1.15				1000	2.90	34.40	27.44	65	1.313
1317	9	2.43	34.49	1.12				1200	2.60	34.45	27.50	60	1.449
484	RYOFU MARU; August 24, 1955; 1530-1620 GCT; 35°03'N, 156°53'E; 0917 03 255 09 x x 1534 3 x x x 29-13 2 4 x x.												
0		25.4	34.09	4.88				0	25.4	34.09	22.55	535	0.000
10	16	25.38	34.07	4.85				10	25.40	34.07	22.53	533	0.053
25	16	23.24	34.40	5.08				25	23.25	34.40	23.42	448	0.117
50	16	17.70	34.54	4.64				50	17.70	34.54	25.01	296	0.221
75	16	14.84	34.40	4.53				75	14.85	34.40	25.56	244	0.289
100	16	12.84	34.40	4.21				100	12.85	34.40	25.98	204	0.345
162	50	11.08	34.34	3.91				150	11.70	34.36	26.17	186	0.444
205	50	8.72	34.18	4.32				200	9.05	34.20	26.50	154	0.531
307	50	5.54	33.93	4.14				300	5.75	33.95	26.77	129	0.677
403	50	4.54	33.96	3.09				400	4.55	33.96	26.92	115	0.803
504	50	3.98	34.00	2.48				500	4.00	34.00	27.00	107	0.917
597	50	3.78	34.18	1.51				600	3.80	34.18	27.17	91	1.021
696	50	3.63	34.24	1.25				700	3.60	34.24	27.24	84	1.113
792	50	3.34	34.33	1.08				800	3.30	34.33	27.34	75	1.198
1004	50	2.90	34.40	0.96				1000	2.90	34.40	27.43	66	1.350
1216	50	2.54	34.45	0.92				1200	2.55	34.45	27.51	59	1.488
485	RYOFU MARU; August 24, 1955; 2130-2235 GCT; 34°36'N, 157°23'E; 1217 02 261 12 x x 1122 3 33-08 2 x 36-10 2 4 x x.												
0		25.2	34.18	5.13				0	25.2	34.18	22.69	517	0.000
10	5	25.15	34.18	4.98				10	25.15	34.18	22.70	516	0.052
26	5	22.48	34.29	5.26				25	22.65	34.29	23.51	439	0.123
52	5	20.18	34.29	4.71				50	20.35	34.29	24.15	378	0.246
78	5	13.94	34.36	5.21				75	14.70	34.36	25.56	244	0.325
103	5	11.97	34.29	5.26				100	12.30	34.31	26.01	201	0.380
159	20	9.52	34.16	4.57				150	9.80	34.18	26.37	167	0.473
212	20	8.42	34.11	4.22				200	8.70	34.13	26.50	154	0.555
318	20	5.04	33.87	4.25				300	5.60	33.91	26.76	130	0.701
423	20	3.65	34.07	3.34				400	3.95	34.04	27.04	103	0.821
528	20	4.14	34.09	2.09				500	4.00	34.09	27.08	99	0.926
633	20	3.94	34.24	1.47				600	4.00	34.20	27.17	91	1.026
737	20	3.60	34.29	1.25				700	3.75	34.27	27.25	83	1.120
840	20	3.23	34.34	1.10				800	3.35	34.33	27.34	75	1.206
1045	20	2.82	34.43	1.00				1000	2.90	34.42	27.45	64	1.346
1265	20	2.50	34.47	1.02				1200	2.60	34.45	27.50	60	1.482

OBSERVED								INTERPOLATED			COMPUTED			
Z m	W *t°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
RYOFU MARU; August 25, 1955; 0300-0440 GCT; 34°11'N, 158°00'E; 1324 03 265 13 x x 1243 3 30-20 2 x 08-10 2 4 x x.														486
0		26.7	34.43	4.86				0	26.7	34.43	22.41	544	0.000	
11	9	26.78	34.43	4.82				10	26.80	34.43	22.39	546	0.054	
26	9	26.60	34.42	4.83				25	26.60	34.42	22.43	542	0.136	
50	9	23.81	34.65	5.07				50	23.80	34.65	23.46	444	0.260	
75	9	21.09	34.74	5.09				75	21.10	34.74	24.30	364	0.362	
100	9	19.84	34.79	5.21				100	19.85	34.79	24.66	329	0.449	
157	27	18.02	34.79	4.82				150	18.25	34.79	25.07	290	0.606	
200	27	16.83	34.79	4.82				200	16.85	34.79	25.41	258	0.746	
290	27	14.29	34.56	4.10				300	13.90	34.54	25.87	214	0.995	
370	27	11.27	34.42	4.06				400	10.15	34.34	26.44	160	1.192	
440	27	8.66	34.27	3.40				500	6.05	33.98	26.77	129	1.344	
506	27	5.84	33.95	4.29				600	4.40	33.91	26.90	117	1.473	
568	27	4.57	33.84	4.16				700	4.10	34.07	27.06	101	1.588	
630	27	4.23	33.96	-				800	3.80	34.22	27.20	88	1.688	
750	27	4.02	34.15	1.86										
872	27	3.54	34.31	1.23										
RYOFU MARU; August 25, 1955; 0927-1011 GCT; 33°37'N, 158°17'E; 0920 01 264 09 x x 1243 3 x x x 11-11 2 4 x x.														487
0		26.8	34.47	4.77				0	26.8	34.47	22.40	545	0.000	
10	12	26.74	34.42	4.71				10	26.75	34.42	22.38	547	0.055	
24	12	26.74	34.40	4.71				25	26.75	34.40	22.37	548	0.137	
50	12	26.60	34.58	4.96				50	26.60	34.58	22.55	531	0.272	
74	12	22.30	34.74	4.81				75	22.20	34.74	23.99	393	0.388	
100	12	20.75	34.76	4.83				100	20.75	34.76	24.40	354	0.488	
180	12	17.53	34.76	4.80				150	18.35	34.76	25.02	295	0.653	
240	12	16.80	34.74	4.91				200	17.30	34.76	25.28	270	0.797	
360	12	15.42	34.61	4.45				300	16.10	34.69	25.51	249	1.064	
480	12	11.61	34.34	4.21				400	14.15	34.52	25.81	220	1.309	
600	12	8.00	34.15	3.91				500	11.05	34.31	26.25	178	1.519	
720	12	4.82	33.98	3.24				600	8.00	34.15	26.63	144	1.681	
840	12	3.94	34.05	2.13				700	5.35	34.00	26.86	120	1.812	
960	12	3.94	34.27	1.50				800	4.25	34.04	27.01	106	1.933	
1200	12	3.10	34.38	0.99				1000	3.80	34.29	27.26	82	2.137	
1440	12	2.62	34.45	1.00				1200	3.10	34.38	27.40	69	2.305	
RYOFU MARU; August 25, 1955; 1535-1630 GCT; 34°12'N, 158°45'E; 1118 25 259 11 x x 1243 3 x x x 09-22 2 4 x x.														488
0		26.5	34.42	4.67				0	26.5	34.42	22.46	539	0.000	
10	11	26.65	34.42	4.35				10	26.65	34.42	22.41	544	0.054	
25	11	26.30	34.38	4.80				25	26.30	34.38	22.50	536	0.135	
49	11	23.00	34.42	5.17				50	22.90	34.43	23.55	435	0.257	
74	11	20.33	34.70	5.01				75	20.40	34.70	24.45	349	0.356	
98	11	18.85	34.74	5.12				100	18.80	34.74	24.89	308	0.439	
157	0	17.29	34.72	4.76				150	17.50	34.72	25.20	278	0.587	
210	0	15.34	34.60	4.36				200	15.70	34.61	25.54	246	0.721	
315	0	11.14	34.29	4.44				300	11.75	34.33	26.14	189	0.845	
420	0	8.35	34.22	3.27				400	8.90	34.24	26.56	149	1.222	
525	0	5.27	33.96	3.49				500	6.00	34.02	26.80	126	1.367	
630	0	4.17	34.02	2.40				600	4.50	34.00	26.96	111	1.492	
735	0	3.98	34.16	1.61				700	4.05	34.11	27.10	98	1.603	
840	0	3.61	34.33	1.34				800	3.75	34.27	27.25	83	1.700	
1050	0	3.08	34.38	1.03				1000	3.20	34.36	27.38	71	1.868	
1260	0	2.65	34.51	0.89				1200	2.80	34.47	27.50	60	2.014	

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OBSERVED								INTERPOLATED			COMPUTED		
Z m	W * °	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Si μg at/L	Tot. P. μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
489	RYOFU MARU; August 25, 1955; 2100-2300 GCT; 34°56'N, 159°00'E; 0815 02 258 08 x x 0932 3 28-10 2 x 36-18 2 4 x x.												
0		26.6	34.34	4.75				0	26.6	34.34	22.37	548	0.000
11	15	26.76	34.38	4.84				10	26.75	34.38	22.36	549	0.055
25	15	26.49	34.36	4.81				25	26.50	34.36	22.42	543	0.137
49	15	22.28	34.70	4.99				50	22.15	34.70	23.98	394	0.267
73	15	19.62	34.70	4.53				75	19.50	34.70	24.69	327	0.364
98	15	17.94	34.69	4.41				100	17.85	34.69	25.09	288	0.442
129	52	16.05	34.61	4.24				150	15.40	34.58	25.58	242	0.577
179	52	14.47	34.51	4.09				200	13.55	34.56	25.96	206	0.691
247	52	11.43	34.65	4.54				300	9.25	34.20	26.47	157	0.878
294	52	9.45	34.20	5.09				400	6.40	33.93	26.68	137	1.031
343	52	8.10	34.07	5.00				500	4.70	33.89	26.85	121	1.165
376	52	7.06	33.98	5.13				600	4.10	34.09	27.07	100	1.281
424	52	5.75	33.87	4.51									
469	52	4.95	33.87	3.96									
520	52	4.56	33.89	3.23									
608	52	4.04	34.11	2.00									
490	RYOFU MARU; August 26, 1955; 0320-0425 GCT; 35°25'N, 159°39'E; 0915 03 263 09 x x 0932 3 32-13 2 x 10-17 2 4 x x.												
0		27.0	34.27	4.75				0	27.0	34.27	22.20	564	0.000
10	10	26.49	34.27	4.51				10	26.50	34.27	22.35	550	0.056
26	10	24.57	34.27	4.49				25	24.45	34.27	22.98	490	0.134
50	10	21.93	34.42	4.91				50	21.95	34.42	23.81	410	0.247
76	10	18.49	34.49	5.16				75	18.60	34.49	24.74	322	0.339
100	10	17.03	34.58	4.39				100	17.05	34.58	25.20	278	0.415
168		13.26	34.38	5.22				150	14.25	34.43	25.72	229	0.543
224		11.28	34.24	5.32				200	12.10	34.31	26.06	196	0.652
336		8.22	34.05	5.16				300	9.20	34.11	26.41	163	0.837
446		5.19	33.80	4.70				400	6.45	33.91	26.65	140	0.994
557		4.18	33.89	3.07				500	4.70	33.84	26.81	125	1.132
667		3.93	34.07	1.90				600	4.05	33.96	26.98	109	1.254
776		3.74	34.20	1.37				700	3.85	34.11	27.11	97	1.363
890		3.42	34.27	1.03				800	3.65	34.22	27.22	86	1.461
1127		2.93	34.36	0.91				1000	3.20	34.31	27.34	75	1.635
1367		2.51	34.45	0.95				1200	2.80	34.38	27.43	66	1.791
491	RYOFU MARU; August 26, 1955; 0930-1100 GCT; 36°05'N, 160°02'E; 0914 01 259 09 x x 0932 3 x x x 34-20 1 2 4 x x.												
0		26.4	34.36	4.95	0.21	26	1.5	0	26.4	34.36	22.45	540	0.000
11	10	26.50	34.34	4.85	0.17	16	1.5	10	26.50	34.34	23.40	545	0.054
27	10	25.22	34.42	5.01	0.15	14	1.3	25	25.40	34.40	22.79	508	0.133
52	10	21.79	34.33	5.38	0.23	19	1.7	50	22.05	34.33	23.71	420	0.250
78	10	19.37	34.36	5.62	0.26	27	1.4	75	19.65	34.36	24.39	355	0.347
103	10	16.95	34.47	5.68	0.38	13	2.0	100	17.25	34.47	25.06	291	0.429
155	31	12.52	34.29	5.77	0.73	16	1.9	150	12.95	34.31	25.89	212	0.556
207	31	10.06	34.25	5.46	1.09	18	2.3	200	10.40	34.25	26.32	172	0.654
303	31	8.35	34.11	4.88	1.35	23	3.1	300	8.40	34.11	26.53	152	0.821
403	31	6.24	33.95	4.53	1.86	28	3.8	400	6.30	33.95	26.70	135	0.970
501	31	4.57	33.95	4.05	2.05	53	4.3	500	4.60	33.95	26.90	117	1.101
596	31	4.62	34.07	2.31	2.57	66	4.6	600	4.60	34.07	27.00	107	1.219
688	31	4.20	34.18	1.65	2.63	74	5.1	700	4.20	34.18	27.13	95	1.326
784	31	3.88	34.24	1.29	2.92u	86	5.6	800	3.85	34.25	27.23	85	1.423
976	31	3.27	34.36	1.07	2.71	103	5.5u	1000	3.25	34.36	27.38	71	1.593
1346	35	2.59	34.47	1.02	2.94	114	5.4u	1200	2.85	34.43	27.47	62	1.741
1583	35	2.29	34.54	1.13	2.80	128	5.6	1500	2.40	34.52	27.58	52	1.934
1821	35	2.05	34.58	1.58	2.63	122	5.5	2000	1.95	34.61	27.70	41	2.207
2060	35	1.92	34.61	1.19	2.66	128	5.4						
2298	35	1.79	34.63	2.16	2.57	122	5.8						

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	✕°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

RYOFU MARU; August 26, 1955; 1800-1950 GCT; 36°10'N, 158°36'E; 1211 02 252 12 x x 0932 3 25-06 2 x 22-05 2 4 x x. 492

0		25.3	34.54	4.92	0	25.3	34.54	22.92	495	0.000
10	9	25.60	34.60	4.92	10	25.60	34.60	22.88	499	0.050
25	9	25.05	34.60	4.99	25	25.05	34.60	23.04	484	0.124
49	9	21.60	34.65	5.02	50	21.55	34.65	24.10	383	0.232
74	9	19.64	34.74	4.48	75	19.60	34.74	24.69	327	0.322
99	9	18.51	34.74	5.06	100	18.50	34.74	24.97	300	0.401
162	17	16.74	34.70	5.01	150	17.10	34.70	25.29	269	0.545
219	17	16.25	34.67	4.80	200	16.40	34.69	25.43	256	0.679
333	17	13.56	34.56	4.48	300	14.35	34.60	25.82	219	0.923
447	17	10.00	34.27	4.24	400	11.45	34.40	26.24	179	1.131
560	17	6.34	33.98	4.04	500	8.30	34.13	26.52	153	1.306
674	17	4.27	33.95	3.25	600	5.60	33.96	26.80	126	1.453
902	17	3.76	34.24	1.41	700	4.25	33.98	26.97	110	1.577
1192	17	2.98	34.42	1.10	800	4.00	34.11	27.10	98	1.687
1482	17	2.38	34.51	1.18	1000	3.50	34.29	27.30	79	1.879
					1200	2.95	34.42	27.45	64	2.039

RYOFU MARU; August 27, 1955; 0330-0430 GCT; 36°08'N, 157°11'E; 1011 02 280 10 x x 1531 3 30-10 2 x 27-13 2 4 x x. 493

0		26.1	34.43	4.84	0	26.1	34.43	22.60	526	0.000
10	17	26.04	34.42	4.82	10	26.05	34.42	22.60	526	0.053
25	17	24.88	34.49	4.91	25	24.90	34.49	23.00	488	0.129
50	17	21.60	34.67	5.18	50	21.60	34.67	24.10	383	0.238
74	17	19.48	34.70	4.65	75	19.45	34.70	24.70	326	0.327
98	17	18.50	34.72	4.75	100	18.50	34.72	24.96	301	0.401
132	48	17.74	34.72	4.95	150	17.45	34.72	25.21	277	0.548
180	48	16.95	34.70	4.86	200	16.75	34.70	25.37	262	0.685
253	48	16.20	34.70	4.76	300	15.40	34.67	25.65	235	0.941
353	48	14.49	34.63	4.50	400	13.80	34.52	25.88	213	1.175
437	48	12.34	34.43	4.17	500	10.50	34.36	26.39	165	1.375
522	48	9.84	34.33	4.23	600	7.20	34.05	26.67	138	1.537
617	48	6.65	34.00	4.28	700	4.70	33.93	26.88	118	1.673
699	48	4.70	33.93	3.66	800	4.30	34.05	27.20	105	1.791
884	48	4.00	34.16	1.70	1000	3.75	34.27	27.25	83	1.995
1063	48	3.60	34.33	1.14						

RYOFU MARU; August 27, 1955; 0900-1040 GCT; 36°12'N, 155°58'E; 1011 02 258 10 x x 1721 3 x x x 29-16 2 4 x x. 494

0		25.9	34.54	4.90	0	25.9	34.54	22.73	514	0.000
11	10	25.94	34.49	4.95	10	25.95	34.49	22.69	517	0.052
26	10	25.90	34.51	4.92	25	25.90	34.51	22.71	516	0.129
50	10	24.39	34.45	4.99	50	24.40	34.45	23.13	475	0.253
75	10	21.02	34.67	4.82	75	21.00	34.67	24.27	367	0.359
100	10	19.38	34.72	4.70	100	19.40	34.72	24.72	324	0.446
150	40	17.24	-	5.09	150	17.25	34.72	25.26	272	0.597
197	40	16.77	34.72	5.05	200	16.75	34.72	25.38	261	0.733
294	40	15.92	34.63	4.69	300	15.75	34.63	25.54	246	0.994
389	40	13.73	34.58	4.45	400	13.40	34.56	25.99	203	1.228
472	40	11.26	34.36	4.68	500	10.20	34.33	26.41	163	1.422
554	40	8.19	34.27	4.02	600	7.20	34.18	26.76	130	1.578
717	40	4.67	33.93	3.52	700	5.00	33.96	26.87	119	1.710
871	40	4.01	34.11	1.82	800	4.30	34.04	27.00	107	1.830
1026	40	3.59	34.27	1.23	1000	3.65	34.24	27.23	85	2.038

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OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
495	RYOFU MARU; August 27, 1955; 1530-1630 GCT; 36°24'N, 154°53'E; 1213 03 254 12 x x 1721 3 x x x 36-20 2 4 x x.												
0		26.0	34.40	4.75				0	26.0	34.40	22.60	526	0.000
10	4	24.59	34.51	5.01				10	24.60	34.51	23.11	477	0.050
25	4	23.92	34.56	4.89				25	23.90	34.56	23.36	458	0.120
50	4	21.69	34.63	4.68				50	21.70	34.63	24.04	388	0.226
75	4	19.06	34.69	4.47				75	19.05	34.69	24.79	317	0.325
100	4	18.03	34.70	4.72				100	18.05	34.70	25.05	292	0.402
145	46	16.80	34.69	4.86				150	16.75	34.69	25.35	264	0.543
191	46	16.03	34.67	4.63				200	15.75	34.65	25.56	244	0.673
275	46	13.50	34.49	4.16				300	12.80	34.49	26.05	197	0.901
343	46	11.60	34.49	4.37				400	9.40	34.18	26.43	161	1.088
395	46	9.52	34.20	4.46				500	6.75	33.98	26.67	138	1.245
443	46	8.13	34.09	4.77				600	4.80	33.93	26.86	120	1.371
547	46	5.63	33.89	4.31									
607	46	4.67	33.93	3.37									
633	46	4.47	33.96	3.07									
496	RYOFU MARU; August 27, 1955; 2130-2240 GCT; 36°30'N, 153°51'E; 1414 03 256 14 x x 1731 3 33-08 2 x 34-30 2 4 x x.												
0		25.9	34.11	4.88				0	25.9	34.11	22.41	544	0.000
10	9	25.93	34.11	4.84				10	25.95	34.11	22.40	545	0.054
26	9	21.92	34.38	5.21				25	21.90	34.36	23.79	412	0.126
51	9	15.87	34.40	5.92				50	15.85	34.40	25.34	265	0.211
77	9	13.70	34.42	4.50				75	13.75	34.42	25.80	221	0.272
103	9	12.29	34.38	4.27				100	12.30	34.38	26.07	195	0.324
138	33	10.57	34.24	4.92				150	10.15	34.20	26.32	172	0.418
176	33	9.20	34.15	4.92				200	8.60	34.11	26.50	154	0.501
276	33	6.75	34.02	4.09				300	6.15	33.98	26.75	131	0.647
368	33	4.36	33.86	4.13				400	4.35	33.91	26.90	117	0.775
458	33	4.36	34.02	2.62				500	4.25	34.05	27.02	105	0.889
552	33	4.15	34.11	1.92				600	4.00	34.15	27.13	95	0.993
736	33	3.61	34.25	1.33				700	3.70	34.24	27.23	85	1.088
919	33	3.13	34.40	1.19				800	3.45	34.31	27.31	78	1.175
1103	33	2.75	34.51	1.76				1000	2.95	34.45	27.48	62	1.327
497	RYOFU MARU; August 28, 1955; 0600-0720 GCT; 37°22'N, 153°18'E; 1713 02 270 17 x x 1731 3 30-12 2 x 14-06 2 4 x x.												
0		25.5	34.15	5.00				0	25.5	34.15	22.56	530	0.000
10	2	25.57	34.15	4.96				10	25.55	34.15	22.55	531	0.053
25	2	24.40	34.13	5.07				25	24.40	34.13	22.89	498	0.130
50	2	17.96	34.38	6.02				50	17.95	34.38	24.83	313	0.232
75	2	13.60	34.36	4.47				75	13.60	34.36	25.80	221	0.299
100	2	12.44	34.40	3.97				100	12.45	34.40	26.06	196	0.352
163	9	9.35	34.20	5.02				150	10.00	34.24	26.37	167	0.444
217	9	8.04	34.11	4.40				200	8.45	34.15	26.55	150	0.525
326	9	4.94	33.86	4.28				300	5.70	33.91	26.75	131	0.664
434	9	4.32	33.96	2.94				400	4.55	33.93	26.90	117	0.797
542	9	4.04	34.13	1.94				500	4.15	34.05	27.03	104	0.911
651	9	3.76	34.22	1.43				600	3.90	34.18	27.17	91	1.013
870	9	3.16	34.36	1.06				700	3.65	34.25	27.25	83	1.105
1089	9	2.72	34.43	1.08				800	3.35	34.33	27.34	75	1.189
1309	9	2.36	34.49	1.16				1000	2.90	34.40	27.43	66	1.341
								1200	2.55	34.47	27.52	58	1.477

RYOFU MARU; August 28, 1955; 1230-1313 GCT; 37°24'N, 152°22'E; 1619 03 256 16 x x 1742 3 x x x 20-03 2 4 x x. 498

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	±	°C	‰	ml/L	µg at/L	µg at/L	µg at/L
0		25.5	34.27	4.90			
10	12	25.43	34.24	4.87			
25	12	22.02	34.27	5.41			
50	12	16.00	34.49	5.48			
74	12	13.12	34.43	4.63			
99	12	11.88	34.34	5.05			
164	27	9.53	34.20	5.28			
218	27	7.94	34.07	5.27			
327	27	5.91	33.96	3.90			
437	27	4.31	33.95	3.13			
542	27	4.12	34.11	2.07			
653	27	3.75	34.20	1.41			
857	27	3.25	34.33	1.03			
1067	27	2.80	34.42	1.07			
1286	27	2.43	34.49	1.09			

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	25.5	34.27	22.66	520	0.000
10	25.45	34.24	22.65	521	0.052
25	22.00	34.27	23.69	422	0.123
50	16.00	34.49	25.38	261	0.209
75	13.05	34.43	25.96	206	0.268
100	11.75	34.34	26.15	188	0.317
150	10.00	34.24	26.37	167	0.411
200	8.45	34.11	26.52	153	0.493
300	6.40	33.98	26.72	134	0.641
400	4.85	33.95	26.88	118	0.771
500	4.20	34.04	27.02	105	0.887
600	3.95	34.16	27.14	94	0.991
700	3.60	34.24	27.24	84	1.085
800	3.40	34.29	27.30	79	1.172
1000	2.95	34.38	27.42	67	1.328
1200	2.55	34.45	27.51	59	1.468

RYOFU MARU; August 28, 1955; 2100-2345 GCT; 37°34'N, 150°38'E; 1617 03 255 16 x x 1732 3 30-20 2 x 33-10 2 4 x x. 499

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	±	°C	‰	ml/L	µg at/L	µg at/L	µg at/L
0		26.0	33.98	4.84			
12	21	25.96	33.96	4.83			
26	21	21.52	34.00	5.65			
50	21	14.85	34.20	5.85			
73	21	12.34	34.33	4.55			
96	21	10.64	34.24	4.49			
106	64	9.18	34.15	4.48			
146	60	6.68	33.87	5.21			
216	60	4.70	33.78	4.98			
289	60	4.50	33.93	4.41			
360	60	4.25	34.02	2.75			
417	60	3.94	34.02	2.45			
545	60	3.69	34.20	1.42			
656	60	3.59	34.27	1.27			
820	60	3.22	34.34	1.08			

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	26.0	33.98	22.30	555	0.000
10	25.95	33.96	22.30	555	0.056
25	21.20	34.00	23.70	421	0.129
50	14.85	34.20	25.41	258	0.214
75	12.15	34.33	26.06	196	0.271
100	10.00	34.20	26.35	169	0.317
150	6.55	33.87	26.62	143	0.396
200	5.15	33.82	26.74	132	0.466
300	4.45	33.95	26.92	115	0.592
400	4.05	34.02	27.02	105	0.705
500	3.80	34.13	27.13	95	0.809
600	3.65	34.24	27.24	84	0.903
700	3.50	34.29	27.30	79	0.989
800	3.30	34.34	27.36	73	1.071

RYOFU MARU; August 29, 1955; 0330-0430 GCT; 37°40'N, 149°51'E; 1614 01 264 16 x x 1732 3 33-14 2 x 32-20 2 4 x x. 500

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	±	°C	‰	ml/L	µg at/L	µg at/L	µg at/L
0		25.6	33.60	4.90			
10	9	25.47	33.59	5.16			
25	9	22.50	33.77	5.37			
51	9	12.30	33.86	5.81			
77	9	8.70	33.91	5.16			
103	9	7.21	33.89	5.10			
165	2	4.36	33.68	5.49			
220	2	4.39	33.82	5.08			
330	2	4.22	34.00	2.87			
460	2	3.62	34.05	1.90			
588	2	3.63	34.22	1.45			
720	2	3.40	34.38	1.14			
850	2	3.15	34.36	1.05			
1110	2	2.65	34.47	1.00			
1370	2	2.29	34.51	1.20			
1630	2	2.04	-	1.33			

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	25.6	33.60	22.12	572	0.000
10	25.45	33.59	22.16	568	0.057
25	22.50	33.77	23.23	466	0.135
50	12.35	33.86	25.65	235	0.223
75	8.95	33.91	26.30	173	0.274
100	7.35	33.89	26.52	153	0.315
150	5.10	33.73	26.68	137	0.388
200	4.40	33.77	26.78	128	0.455
300	4.25	33.95	26.94	113	0.578
400	3.90	34.04	27.05	102	0.688
500	3.60	34.11	27.14	94	0.789
600	3.60	34.24	27.24	84	0.881
700	3.40	34.36	27.36	73	0.964
800	3.20	34.36	27.38	71	1.041
1000	2.85	34.43	27.47	62	1.185
1200	2.50	34.49	27.54	56	1.317
1500	2.15				

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OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

501 RYOFU MARU; August 29, 1955; 0925-1015 GCT; 37°23'N, 149°05'E; 1621 02 258 16 x x 2022 3 x x x 23-23 2 4 x x.

0		26.1	33.86	4.74			0	26.1	33.86	22.17	567	0.000
10	8	26.10	33.86	4.89			10	26.10	33.86	22.17	567	0.057
25	8	26.06	33.95	4.86			25	26.05	33.95	22.25	559	0.141
50	8	20.36	34.00	5.86			50	20.35	34.00	23.94	399	0.261
74	8	17.58	34.49	5.44			75	17.50	34.49	25.02	295	0.348
99	8	15.27	34.47	5.35			100	15.20	34.47	25.55	245	0.416
147	8	11.74	34.13	5.22			150	11.65	34.14	26.02	200	0.530
197	8	10.64	34.29	4.93			200	10.55	34.27	26.31	173	0.624
295	8	7.04	33.98	4.84			300	6.95	33.98	26.65	140	0.786
400	8	4.94	33.93	3.82			400	4.95	33.93	26.86	120	0.920
514	8	4.26	34.04	2.59			500	4.35	34.02	26.99	108	1.038
645	8	3.95	34.18	1.54			600	4.05	34.13	27.11	97	1.145
910	8	3.28	34.34	1.10			700	3.80	34.22	27.20	88	1.243
1172	8	2.74	34.43	1.04			800	3.55	34.29	27.29	80	1.333
1453	8	2.34	34.51	1.16			1000	3.10	34.38	27.40	69	1.495
							1200	2.70	34.43	27.48	62	1.639

502 RYOFU MARU; August 29, 1955; 1900-2130 GCT; 38°28'N, 148°52'E; 1824 16 262 18 x x 2022 3 35-10 2 x 10-16 1 2 4 x x.

0		26.8	34.34	4.84	0.16	1.4	0	26.8	34.34	22.31	554	0.000
11	15	26.91	34.33	4.80	0.12	1.3	10	26.90	34.33	22.27	558	0.056
25	15	25.71	34.42	4.91	0.17	1.8	25	25.70	34.42	22.71	515	0.136
49	15	22.07	34.76	4.76	0.31	1.4u	50	21.95	34.76	24.07	386	0.250
73	15	19.98	34.74	5.08	-	2.5u	75	19.85	34.74	24.62	333	0.341
98	15	18.48	34.78	4.58	0.09u	2.1	100	18.40	34.78	25.02	295	0.420
128	62	17.66	34.70	4.42	0.38	2.2	150	16.90	34.70	25.33	266	0.564
162	62	16.48	34.70	4.44	0.56	2.1	200	15.30	34.61	25.63	237	0.692
232	62	14.26	34.56	4.23	0.74	2.6	300	11.05	34.38	26.30	173	0.904
302	62	10.90	34.38	4.06	1.05	3.2	400	7.35	34.16	26.73	133	1.064
373	62	8.66	34.20	3.86	1.37	3.3	500	4.75	34.05	26.97	110	1.192
442	62	5.24	-	-	-	3.5	600	4.05	34.00	27.00	107	1.306
576	62	4.08	33.96	3.02	2.29	4.7	700	3.95	34.14	27.13	95	1.412
709	62	3.96	34.16	1.82	2.66	4.9	800	3.60	34.22	27.22	86	1.508
866	62	3.48	34.27	1.32	2.68	5.6	1000	3.20	34.33	27.35	74	1.680
1262	54	2.64	34.43	1.10	2.99	5.5	1200	2.80	34.42	27.46	63	1.832
1478	54	2.41	34.52	1.22	2.80	5.6	1500	2.40	34.52	27.58	52	2.030
1695	54	2.14	34.56	1.40	2.64	6.9u						
1911	54	1.99	34.67	1.70	2.64	5.2						

503 RYOFU MARU; August 30, 1955; 0340-0510 GCT; 38°28'N, 148°02'E; 1929 02 269 19 x x 2034 3 25-12 2 x 09-15 2 4 x x.

0		26.7	34.24	4.82		0	26.7	34.24	22.26	558	0.000
11	23	26.80	34.20	4.78		10	26.80	34.20	22.20	564	0.056
27	23	24.59	34.15	5.07		25	24.85	34.15	22.77	510	0.137
52	23	19.48	34.78	4.65		50	19.90	34.72	24.60	335	0.243
76	23	17.33	34.74	4.95		75	17.40	34.74	25.23	275	0.320
101	23	16.40	34.70	5.01		100	16.45	34.70	25.44	255	0.387
199	60	12.55	34.47	4.15		150	14.50	34.58	25.78	223	0.508
251	60	10.86	34.40	3.78		200	12.50	34.47	26.10	192	0.613
325	60	7.38	34.05	3.80		300	8.50	34.16	26.56	149	0.790
377	60	1.62	33.60	5.01		400	1.80	33.69	26.96	111	0.924
418	60	1.93	33.75	4.65		500	1.85	33.62	26.90	117	1.039
450	60	1.53	33.57	5.13		600	3.10	33.89	27.01	106	1.153
521	60	2.02	33.66	4.18							
552	60	3.14	33.82	2.98							
655	60	3.04	33.98	2.00							

OBSERVED								INTERPOLATED			COMPUTED			JMA
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_{T_3}	ΔD	NORPAC
m	*°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	
RYOFU MARU; August 30, 1955; 1200-1340 GCT; 38°32'N, 147°02'E; 1826 00 252 19 x x 2034 3 x x x 22-23 2 4 x x.														504
0		25.0	33.19	5.05				0	25.0	33.19	22.00	583	0.000	
11	11	25.07	33.22	5.12				10	25.05	33.22	22.00	583	0.058	
25	11	15.34	33.75	7.09				25	15.35	33.75	24.95	302	0.125	
50	11	12.56	34.18	5.05				50	12.55	34.18	25.86	215	0.190	
75	11	10.38	34.02	5.17				75	10.40	34.02	26.14	189	0.241	
99	11	7.56	33.80	5.80				100	7.55	33.80	26.42	162	0.285	
179	30	6.92	34.07	3.86				150	7.15	33.98	26.62	143	0.362	
231	30	4.38	33.80	4.86				200	5.90	33.96	26.77	129	0.431	
341	30	4.38	33.98	3.02				300	4.40	33.91	26.90	117	0.557	
457	30	3.80	34.07	2.26				400	4.10	34.04	27.03	104	0.671	
569	30	3.34	34.16	1.69				500	3.60	34.11	27.14	94	0.773	
681	30	3.04	34.24	1.18				600	3.25	34.18	27.23	85	0.866	
949	30	2.99	34.42	1.21				700	3.05	34.25	27.31	78	0.952	
1229	30	2.50	34.51	1.09				800	3.00	34.33	27.37	72	1.032	
1499	30	2.15	34.56	1.31				1000	2.90	34.43	27.46	63	1.178	
								1200	2.55	34.51	27.55	55	1.310	
RYOFU MARU; August 30, 1955; 1830-1933 GCT; 38°28'N, 146°11'E; 1822 00 252 18 x x 2035 3 x x x 09-05 2 4 x x.														505
0		24.6	33.69	5.04				0	24.6	33.69	22.50	536	0.000	
9	29	23.41	34.16	5.05				10	23.10	34.20	23.32	457	0.050	
23	29	19.43	34.67	4.32				25	19.25	34.67	24.72	324	0.108	
46	29	17.52	34.67	4.27				50	17.05	34.65	25.25	273	0.183	
67	29	15.06	34.60	4.05				75	14.50	34.56	25.76	225	0.246	
91	29	13.36	34.51	4.15				100	12.80	34.47	26.04	198	0.300	
164	50	9.04	34.24	3.78				150	9.65	34.29	26.48	156	0.394	
232	50	3.59	33.66	5.62				200	6.15	33.93	26.71	135	0.468	
357	50	4.03	33.95	2.95				300	3.85	33.82	26.88	118	0.597	
486	50	3.89	34.15	1.81				400	3.95	34.02	27.02	105	0.711	
598	50	3.59	34.24	1.38				500	3.80	34.16	27.16	92	0.813	
712	50	3.37	34.34	1.15				600	3.60	34.24	27.24	84	0.905	
923	50	2.87	34.45	1.00				700	3.40	34.34	27.34	75	0.989	
1128	50	2.53	34.51	1.11				800	3.15	34.40	27.41	68	1.065	
1360	50	2.27	34.54	1.25				1000	2.75	34.47	27.50	60	1.205	
								1200	2.45	34.51	27.56	54	1.331	
RYOFU MARU; August 31, 1955; 0040-0210 GCT; 38°30'N, 145°27'E; 1926 03 259 19 x x 2035 3 17-18 3 x 09-13 2 4 x x.														506
0		24.6	33.62	5.39				0	24.6	33.62	22.45	540	0.000	
10	25	24.52	33.60	5.28				10	24.50	33.60	22.46	539	0.054	
24	25	17.53	33.69	6.46				25	17.35	33.69	24.45	349	0.121	
48	25	13.42	33.87	6.34				50	13.25	33.89	25.60	240	0.195	
72	25	11.59	34.05	5.85				75	11.15	34.04	26.02	200	0.250	
94	25	8.54	33.86	5.72				100	8.05	33.84	26.37	167	0.297	
174	20	3.51	33.60	5.85				150	4.95	33.68	26.65	140	0.375	
224	20	4.95	33.89	4.46				200	4.25	33.75	26.78	128	0.443	
306	20	4.38	34.02	2.90				300	4.40	34.02	26.98	109	0.564	
391	20	4.58	34.07	2.66				400	4.55	34.09	27.02	105	0.674	
478	20	4.41	34.27	1.94				500	4.15	34.27	27.21	87	0.774	
568	20	3.38	34.25	1.29				600	3.35	34.27	27.30	79	0.861	
742	20	3.32	34.38	1.17				700	3.30	34.34	27.36	73	0.941	
1061	37	2.67	34.49	1.33				800	3.20	34.40	27.41	68	1.017	
1293	37	2.32	34.51	1.38				1000	2.80	34.47	27.50	60	1.157	
								1200	2.45	34.51	27.56	54	1.283	

JMA

NORPAC

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	*°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

507 RYOFU MARU; August 31, 1955; 0930-1032 GCT; 38°26'N, 144°24'E; 1921 03 257 19 x x 2036 3 x x x 18-12 2 4 x x.

0		25.2	33.59	5.13			0	25.2	33.59	22.23	561	0.000
10	3	25.22	33.59	5.07			10	25.20	33.59	22.23	561	0.056
25	3	14.16	33.55	4.51			25	14.15	33.55	25.06	291	0.120
51	3	11.38	34.18	7.01			50	11.50	34.15	26.04	198	0.182
76	3	5.58	33.51	6.40			75	5.80	33.57	26.47	157	0.227
158	20	4.50	33.82	4.71			100	5.45	33.60	26.53	152	0.266
210	20	4.88	33.98	3.30			150	4.85	33.80	26.76	130	0.337
315	20	4.55	34.15	2.18			200	4.65	33.95	26.90	117	0.400
419	20	3.56	34.15	1.53			300	4.60	34.13	27.04	103	0.512
524	20	3.65	34.31	1.34			400	3.75	34.15	27.15	93	0.613
639	20	2.89	34.29	0.99			500	3.65	34.27	27.26	82	0.704
867	20	2.64	34.42	0.99			600	3.15	34.29	27.31	78	0.788
1096	20	2.41	34.51	1.07			700	2.80	34.33	27.39	70	0.866
1327	20	2.24	34.54	1.25			800	2.70	34.38	27.44	65	0.938
							1000	2.50	34.47	27.53	57	1.070
							1200	2.35	34.52	27.59	51	1.190

508 RYOFU MARU; August 31, 1955; 1535-1640 GCT; 38°25'N, 143°32'E; 1926 25 244 19 x x 2046 3 x x x 15-05 2 4 x x.

0		24.4	33.64	5.06			0	24.4	33.64	22.52	534	0.000
10	13	24.47	33.60	5.06			10	24.45	33.60	22.48	537	0.054
25	13	16.99	33.73	6.32			25	17.00	33.73	24.57	338	0.119
49	13	14.18	34.34	4.68			50	14.05	34.33	25.68	232	0.191
73	13	10.78	34.13	4.83			75	10.55	34.11	26.18	185	0.243
98	13	7.84	33.80	5.51			100	7.80	33.82	26.39	165	0.293
163	30	6.25	34.07	3.74			150	6.60	34.02	26.73	133	0.369
219	30	4.09	33.87	3.85			200	4.80	33.95	26.88	118	0.433
325	30	4.23	34.13	2.18			300	4.20	34.07	27.05	102	0.545
432	30	3.34	34.15	1.47			400	3.60	34.15	27.16	92	0.645
540	30	3.48	34.25	1.24			500	3.20	34.22	27.26	82	0.735
647	30	3.21	34.33	1.16			600	3.30	34.29	27.31	78	0.818
870	30	2.83	34.43	2.02			700	3.10	34.34	27.38	71	0.896
1100	30	2.42	34.52	1.21			800	2.95	34.40	27.44	65	0.968
1337	30	2.18	34.56	1.51			1000	2.60	34.49	27.54	56	1.100
							1200	2.30	34.54	27.58	52	1.220

509 RYOFU MARU; September 6, 1955; 2100-2350 GCT; 39°32'N, 144°08'E; 0818 01 219 08 x x 0943 3 20-10 3 x 12-03 1 2 4 x x.

0		23.0	33.33	5.38	0.26	21	0	23.0	33.33	22.69	517	0.000
10	4	23.25	33.64	5.35	-	21	10	23.25	33.64	22.85	501	0.051
25	4	15.53	34.15	6.19	0.14	22	25	15.55	34.15	25.22	276	0.109
50	4	11.28	34.05	5.37	0.79	30	50	11.30	34.05	25.58	242	0.174
75	4	9.85	34.05	4.86	1.03	39	75	9.85	34.05	26.26	177	0.225
100	4	10.03	34.31	3.76	1.40	43	100	10.05	34.31	26.42	162	0.268
159	16	5.40	33.87	4.85	-	54	150	6.15	33.95	26.73	133	0.343
212	16	3.84	33.71	5.07	2.00	57	200	4.20	33.75	26.75	131	0.410
318	16	2.75	33.78	3.41	2.56	69	300	2.95	33.77	26.94	113	0.534
424	16	3.05	33.95	2.24	-	80	400	3.00	33.91	27.04	103	0.644
530	16	3.44	34.15	1.44	-	94	500	3.35	34.09	27.15	93	0.744
646	16	3.62	34.33	1.36	-	96	600	3.55	34.25	27.26	82	0.835
876	16	2.98	34.40	1.11	2.71	111	700	3.50	34.34	27.34	75	0.918
1113	16	2.56	34.49	1.10	2.77	116	800	3.20	34.38	27.39	70	0.996
1356	16	2.30	34.52	1.33	2.47	125	1000	2.75	34.45	27.49	61	1.138
1554	36	2.20	34.58	1.57	-	116	1200	2.55	34.51	27.56	54	1.266
1758	36	1.98	34.60	1.79	2.77	134	1500	2.25	34.56	27.62	48	1.438
1963	36	1.85	34.52	1.76	2.92u	108	2000	1.85	34.61	27.70	41	1.694
2168	36	1.75	34.63	2.46	2.24	122						

RYOFU MARU; September 7, 1955; 0630-0710 GCT; 39°32'N, 145°16'E; 2317 03 236 23 x x 1343 3 18-20 3 x 28-05 2 4 x x. 510

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm³/g	dyn. m
0		23.2	33.35	5.13				0	23.2	33.35	22.66	520	0.000
10	5	23.24	33.37	5.23				10	23.25	33.37	22.65	521	0.052
25	5	14.36	33.39	7.41				25	14.35	33.39	24.89	308	0.114
50	5	12.06	34.04	5.51				50	12.05	34.04	25.85	216	0.180
75	5	10.32	34.56	5.74				75	10.30	34.56	26.58	147	0.226
116	17	7.09	33.60	6.20				100	8.35	33.98	26.44	160	0.265
174	17	6.86	34.07	3.54				150	6.95	33.87	26.56	149	0.343
232	17	4.91	34.04	2.93				200	6.00	34.05	26.83	123	0.412
349	17	3.38	33.96	2.14				300	4.05	34.00	27.00	107	0.530
466	17	3.82	34.20	1.52				400	3.55	34.07	27.12	96	0.634
570	17	3.29	34.22	1.23				500	3.65	34.20	27.21	87	0.728

RYOFU MARU; September 7, 1955; 1240-1315 GCT; 39°31'N, 146°10'E; 2519 02 227 25 x x 1743 3 x x x 24-12 2 4 x x. 511

0		23.4	33.84	5.19				0	23.4	33.84	22.96	492	0.000
11	10	23.47	33.84	5.21				10	23.45	33.84	22.93	494	0.049
28	10	19.50	34.52	6.07				25	20.20	34.40	24.27	367	0.114
53	14	16.30	34.54	5.59				50	16.70	34.54	25.25	273	0.194
80	14	13.82	34.40	4.60				75	14.35	34.42	25.69	231	0.258
110	14	11.50	34.29	4.81				100	12.25	34.33	26.04	198	0.312
165	14	9.32	34.15	5.05				150	9.90	34.18	26.35	169	0.405
220	14	6.90	33.93	5.10				200	7.80	34.00	26.54	151	0.487
330	14	4.55	33.82	4.21				300	5.20	33.86	26.77	129	0.631
440	14	3.96	33.95	2.68				400	4.15	33.91	26.92	115	0.757
550	14	3.90	34.13	1.75				500	3.90	34.05	27.06	101	0.869

RYOFU MARU; September 7, 1955; 2130-2220 GCT; 39°30'N, 147°32'E; 2627 02 222 26 x x 2445 3 23-18 3 x 03-06 2 4 x x. 512

0		23.1	33.95	5.15				0	23.1	33.95	23.13	475	0.000
10	33	23.35	33.93	5.19				10	23.35	33.93	23.04	484	0.048
24	33	22.75	33.93	5.26				25	22.40	33.96	23.34	455	0.119
49	33	16.28	34.58	4.55				50	16.20	34.58	25.40	259	0.208
73	33	13.77	34.34	4.53				75	13.50	34.33	25.79	222	0.269
83	57	12.44	34.24	4.77				100	11.75	34.24	26.07	195	0.321
124	57	10.74	34.22	4.13				150	9.70	34.20	26.40	164	0.412
170	57	8.87	34.20	5.60				200	7.80	34.09	26.61	144	0.491
264	57	5.44	33.86	5.96				300	4.95	33.87	26.81	125	0.629
365	57	4.13	33.89	3.54				400	4.00	33.91	26.94	113	0.751
477	57	3.78	33.98	2.24									

JMA

NORPAC

513 RYOFU MARU; September 8, 1955; 0530-0620 GCT; 39°27'N, 148°58'E; 2821 25 210 28 x x 2544 3 22-12 2-3 x 20-06 2 4 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		23.0	33.46	5.61				0	23.0	33.46	22.79	508	0.000
11	28	23.06	33.60	5.21				10	23.05	33.60	22.89	498	0.050
26	28	22.72	33.60	5.35				25	22.75	33.60	22.98	490	0.124
50	28	13.70	34.02	5.78				50	13.70	34.02	25.51	249	0.217
74	28	11.50	34.02	5.45				75	11.45	34.02	25.95	207	0.274
124	50	9.38	34.20	5.18				100	10.40	34.11	26.21	182	0.323
186	50	7.25	33.95	5.14				150	8.70	34.09	26.48	156	0.409
251	50	5.25	33.86	4.49				200	7.25	33.93	26.56	149	0.487
392	50	4.32	33.91	3.23				300	4.95	33.87	26.81	125	0.627
537	50	3.93	34.07	1.95				400	4.30	33.91	26.90	117	0.751
690	50	3.56	34.42	1.28				500	4.05	34.04	27.04	103	0.865
								600	3.80	34.22	27.20	88	0.965

514 RYOFU MARU; September 8, 1955; 1200-1310 GCT; 39°31'N, 150°04'E; 3022 01 207 30 x x 2544 3 x x x 26-08 2 4 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		23.7	33.51	5.22				0	23.7	33.51	22.62	524	0.000
11	12	23.88	33.42	5.20				10	23.85	33.42	22.51	535	0.053
25	12	23.46	33.84	5.32				25	23.45	33.84	22.95	493	0.130
50	12	18.52	34.34	5.52				50	18.50	34.34	24.66	329	0.233
74	12	13.44	34.22	5.28				75	13.40	34.22	25.72	229	0.303
141	22	8.76	33.96	5.15				100	11.65	34.05	25.95	207	0.358
212	22	5.56	33.93	4.93				150	8.40	33.96	26.42	162	0.452
282	22	3.87	33.69	5.07				200	6.10	33.93	26.72	134	0.527
423	22	4.22	33.98	2.77				300	3.90	33.73	26.80	126	0.659
560	22	3.99	34.13	1.68				400	4.15	33.93	26.92	115	0.782
706	22	3.45	34.25	1.15				500	4.10	34.07	27.05	102	0.894
								600	3.85	34.16	27.16	92	0.995
								700	3.50	34.25	27.27	81	1.087

515 RYOFU MARU; September 8, 1955; 2130-2220 GCT; 40°21'N, 149°56'E; 2929 03 180 29 x x 2745 3 17-22 3 x 17-05 2 4 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	×°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		22.1	33.69	5.14				0	22.1	33.69	23.22	467	0.000
10	35	22.22	33.69	5.09				10	22.20	33.69	23.20	469	0.047
24	35	22.23	33.69	4.56				25	21.95	33.71	23.28	461	0.117
47	35	15.23	34.20	6.89				50	14.80	34.20	25.42	257	0.207
70	35	11.98	34.25	6.20				75	11.60	34.24	26.10	192	0.263
92	35	10.20	34.15	5.72				100	9.90	34.11	26.30	173	0.309
167	64	6.79	33.89	5.33				150	7.45	33.95	26.54	151	0.391
209	64	5.88	33.84	5.40				200	6.10	33.84	26.64	141	0.466
218	64	5.58	33.77	5.41				300	5.15	33.86	26.77	129	0.604
301	64	5.12	33.86	4.32									
329	64	4.15	33.86	3.82									

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	*°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

RYOFU MARU; September 9, 1955; 0500-0615 GCT; 40°28'N, 149°05'E; 2723 16 180 27 x x 2846 3 25-27 2-3 x 22-03 2 4 x x. 516

0		22.4	33.98	5.23	0	22.4	33.98	23.36	453	0.000
11	10	22.72	33.98	5.23	10	22.70	33.98	23.27	462	0.046
25	10	21.44	34.02	5.47	25	21.45	34.02	23.65	426	0.112
50	10	14.43	34.33	4.84	50	14.45	34.33	25.59	241	0.196
74	10	12.77	34.33	4.46	75	12.75	34.33	25.94	208	0.252
146	20	9.67	34.20	5.62	100	11.65	34.29	26.13	190	0.303
218	20	7.25	34.25	5.42	150	9.55	34.20	26.42	162	0.392
291	20	5.26	33.86	4.71	200	7.85	34.24	26.71	135	0.468
437	20	4.10	33.95	3.02	300	5.20	33.86	26.77	129	0.604
583	20	3.81	34.15	1.65	400	4.40	33.93	26.91	116	0.730
730	20	3.45	-	1.28	500	4.00	34.04	27.03	104	0.844
					600	3.75				
					700	3.50				

RYOFU MARU; September 9, 1955; 1230-1315 GCT; 40°26'N, 148°04'E; 2807 80 158 28 x x 3045 3 x x x 13-06 2 4 x x. 517

0		21.4	33.42	5.32	0	21.4	33.42	23.21	468	0.000
10	14	21.62	33.42	5.28	10	21.60	33.42	23.16	472	0.047
24	14	19.34	33.46	6.02	25	19.05	33.46	23.84	408	0.113
49	14	9.26	33.62	6.10	50	9.10	33.62	26.05	197	0.189
73	14	6.79	33.73	5.58	75	6.70	33.73	26.48	156	0.234
114	40	4.77	33.64	5.78	100	5.50	33.66	26.57	148	0.272
175	40	4.02	33.71	4.84	150	4.35	33.68	26.71	135	0.343
235	40	3.87	33.78	3.86	200	3.95	33.75	26.81	125	0.409
350	40	3.82	33.86	2.57	300	3.85	33.82	26.88	118	0.533
459	40	3.92	34.13	1.73	400	3.85	33.98	27.01	106	0.647
571	40	3.52	34.22	1.47	500	3.75	34.16	27.16	92	0.749

RYOFU MARU; September 9, 1955; 2100-2215 GCT; 40°28'N, 146°32'E; 0320 01 168 03 x x 3033 3 17-03 3 x 25-02 2 4 x x. 518

0		20.4	33.73	5.45	0	20.4	33.73	23.71	420	0.000
11	16	21.15	33.68	5.41	10	21.10	33.68	23.48	442	0.043
25	16	20.53	33.73	5.60	25	20.55	33.73	23.67	424	0.108
49	16	10.56	33.82	6.36	50	10.45	33.82	23.76	415	0.213
73	16	8.82	33.89	5.22	75	8.80	33.91	26.32	172	0.287
108	33	8.35	34.07	5.10	100	8.45	34.04	26.47	157	0.328
162	33	3.65	33.53	6.23	150	4.65	33.64	26.66	139	0.403
218	33	3.77	33.69	5.15	200	3.70	33.64	26.75	131	0.472
330	33	4.09	33.91	3.19	300	4.00	33.86	26.90	117	0.598
437	33	2.82	33.95	2.21	400	3.25	33.93	27.03	104	0.711
548	33	2.92	34.04	1.48	500	2.85	33.98	27.11	97	0.814

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OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ϰ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
519	RYOFU MARU; September 10, 1955; 0625-0655 GCT; 40°26'N, 144°58'E; 0124 01 181 01 x x 3633 3 18-15 3 x 04-02 2 4 x x.												
0		22.6	33.86	5.12				0	22.6	33.86	23.07	481	0.000
9	23	22.81	33.86	5.26				10	22.55	33.87	23.23	466	0.047
24	23	18.64	34.22	6.10				25	18.50	34.24	24.58	337	0.108
48	23	16.11	34.52	4.39				50	15.85	34.52	25.44	255	0.182
72	23	13.59	34.45	4.29				75	13.20	34.42	25.92	210	0.240
105	35	10.12	34.05	5.35				100	10.70	34.11	26.16	187	0.290
158	35	5.28	33.69	5.76				150	6.10	33.75	26.57	148	0.375
211	35	4.48	33.69	4.96				200	4.65	33.69	26.70	135	0.447
320	35	4.13	33.87	3.40				300	4.20	33.71	26.76	130	0.581
429	35	4.10	34.09	2.02				400	4.10	34.02	27.01	106	0.701
537	35	3.32	34.11	1.43				500	3.60	34.11	27.14	94	0.804
520	RYOFU MARU; September 10, 1955; 2140-2220 GCT; 41°26'N, 146°21'E; 0121 02 146 01 x x 0533 3 22-13 3 x 12-02 2 4 x x.												
0		19.7	33.28	5.46				0	19.7	33.28	23.54	436	0.000
10	17	19.89	33.28	5.39				10	19.90	33.28	23.50	440	0.044
25	17	19.89	33.30	5.41				25	19.90	33.30	23.50	440	0.110
50	17	12.05	33.86	6.82				50	12.05	33.86	25.71	230	0.194
75	17	9.50	33.86	5.16				75	9.50	33.86	26.16	187	0.246
101	42	8.40	33.95	4.57				100	8.45	33.95	26.40	164	0.291
152	42	6.94	34.11	3.08				150	7.00	34.11	26.74	132	0.366
203	42	5.71	34.11	2.47				200	5.80	34.11	26.90	117	0.429
310	42	4.70	34.16	1.93				300	4.80	34.16	27.05	102	0.541
420	42	3.98	34.22	1.53				400	4.10	34.22	27.18	90	0.641
530	42	3.52	34.25	1.28				500	3.65	34.25	27.25	83	0.731
521	RYOFU MARU; September 11, 1955; 0525-0615 GCT; 41°30'N, 147°38'E; 3428 03 146 34 x x 0334 3 18-13 3 x 22-03 2 4 x x.												
0		18.5	33.26	5.77				0	18.5	33.26	23.82	409	0.000
11	35	18.61	33.26	5.87				10	18.60	33.26	23.81	410	0.041
25	35	12.40	33.77	7.99				25	12.40	33.77	25.57	243	0.090
49	35	6.74	33.53	6.48				50	6.65	33.53	26.33	171	0.142
73	35	5.02	33.62	6.08				75	4.95	33.62	26.61	144	0.182
97	35	3.95	33.62	6.43				100	3.90	33.62	26.72	134	0.217
161	67	3.44	33.60	5.80				150	3.55	33.60	26.74	132	0.294
215	67	3.07	33.69	4.51				200	3.15	33.68	26.84	122	0.358
321	67	3.55	33.87	3.04				300	3.45	33.84	26.93	114	0.478
447	67	3.41	34.09	1.66				400	3.45	34.00	27.07	100	0.587
592	67	3.49	34.25	1.40				500	3.45	34.15	27.18	90	0.685

RYOFU MARU; September 11, 1955; 1240-1405 GCT; 41°27'N, 148°43'E; 3532 02 132 35 x x 0334 3 x x x 14-07 4 x x. 522

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁎°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		19.8	33.60	5.67				0	19.8	33.60	23.77	414	0.000
9	40	19.96	33.55	5.68				10	19.95	33.55	23.70	421	0.042
22	40	19.95	33.53	5.66				25	18.75	33.55	24.13	380	0.102
47	40	8.52	33.62	6.80				50	8.35	33.66	26.19	184	0.173
64	40	7.69	33.82	5.39				75	6.90	33.78	26.50	154	0.215
102	70	5.09	33.68	5.90				100	5.25	33.68	26.62	143	0.253
183	70	3.84	33.62	5.81				150	4.35	33.64	26.69	136	0.323
270	70	3.82	33.87	3.34				200	3.85	33.68	26.77	129	0.390
358	70	4.07	34.05	2.13				300	3.90	33.93	26.96	111	0.512

RYOFU MARU; September 11, 1955; 2130-2225 GCT; 41°30'N, 149°51'E; 3534 02 119 35 x x 0336 3 15-20 4-5 x 10-06 4 x x. 523

0		14.5	33.69	6.24				0	14.5	33.69	25.09	288	0.000
10	35	14.60	33.66	6.58				10	14.60	33.66	25.04	293	0.029
25	35	12.51	33.68	7.87				25	12.50	33.68	25.49	250	0.070
49	35	8.78	33.84	5.63				50	8.55	33.82	26.28	175	0.123
74	35	2.13	33.17	7.52				75	2.10	33.17	26.53	152	0.164
99	35	1.91	33.24	7.16				100	1.90	33.24	26.60	145	0.204
191	56	1.21	33.39	5.89				150	1.50	33.31	26.68	137	0.275
245	56	1.90	33.60	4.51				200	1.30	33.42	26.77	129	0.342
376	56	2.81	33.91	2.31				300	2.30	33.73	26.95	112	0.464
522	56	2.92	34.09	1.33				400	2.80	33.95	27.08	99	0.571
676	56	2.79	34.22	0.96				500	2.90	34.07	27.18	90	0.668
								600	2.85	34.16	27.26	82	0.757

RYOFU MARU; September 12, 1955; 0930-1233 GCT; 42°25'N, 149°24'E; 3618 02 103 36 x x 0135 3 x x x 24-10 1 2 4 x x. 524

0		12.4	32.72	6.41	0.88	3.7		0	12.4	32.72	24.76	320	0.000
10	17	12.40	32.68	6.48	1.02	4.7		10	12.40	32.68	24.74	322	0.032
25	17	12.36	32.68	6.45	1.05	3.8		25	12.35	32.68	24.74	322	0.080
50	17	2.04	33.12	7.30	2.01	5.0		50	2.05	33.12	26.49	155	0.140
75	17	1.20	33.21	7.20	2.05	9.5		75	1.20	33.21	26.63	142	0.177
103	44	1.03	33.28	7.09	2.17	5.7		100	1.05	33.28	26.68	137	0.212
150	44	1.20	33.37	6.30	2.29	6.0		150	1.20	33.37	26.74	132	0.279
198	44	1.69	33.55	4.99	2.38	5.6		200	1.70	33.55	26.85	121	0.343
293	44	2.33	33.86	3.29	2.43	6.5		300	2.30	33.86	27.05	102	0.457
382	44	2.82	33.91	1.64	2.73	6.9		400	2.80	33.91	27.06	101	0.560
478	44	2.80	33.95	1.88	2.75	8.2		500	2.80	33.98	27.11	97	0.662
585	44	2.74	34.11	1.39	2.86	8.7		600	2.80	34.13	27.23	85	0.756
671	53	2.88	34.22	1.05	2.76	7.4		700	2.85	34.24	27.31	78	0.841
898	53	2.56	34.33	1.08	2.82	6.6		800	2.65	34.29	27.37	72	0.920
1109	53	2.45	34.36	0.97	2.50	6.6		1000	2.50	34.34	27.43	66	1.068
1596	38	2.24	34.51	1.52	2.82	6.5		1200	2.40	34.40	27.48	62	1.208
1844	38	2.06	34.54	1.69	2.71	6.3		1500	2.30	34.47	27.55	55	1.403
2085	38	1.90	34.61	2.05	2.68	6.4		2000	1.95	34.60	27.68	43	1.686
2327	38	1.77	34.61	2.36	2.55	5.9							

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OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δT	ΔD
m	σ_t°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

525 RYOFU MARU; September 12, 1955; 2100-2205 GCT; 42°27'N, 147°18'E; 1103 01 108 11 x x 0533 3 15-10 3 x 21-05 2 4 x x.

0		14.5	32.77	6.30	0	14.5	32.77	24.38	356	0.000
10	4	14.68	32.77	6.22	10	14.70	32.77	24.34	360	0.036
25	4	6.69	33.03	9.06	25	6.70	33.03	25.93	209	0.078
50	4	3.49	33.21	7.34	50	3.50	33.21	26.43	161	0.125
75	4	3.37	33.40	6.70	75	3.35	33.40	26.60	145	0.163
99	26	2.13	33.39	7.10	100	2.10	33.39	26.70	135	0.198
148	26	1.50	33.39	6.26	150	1.50	33.39	26.74	132	0.265
201	26	1.77	33.57	4.89	200	1.75	33.57	26.86	120	0.329
303	26	2.72	33.80	3.18	300	2.70	33.80	26.98	109	0.445
412	26	3.19	33.91	2.08	400	3.15	33.89	27.01	106	0.555
511	26	2.90	33.95	1.42	500	2.95	33.95	27.08	99	0.661

526 RYOFU MARU; September 13, 1955; 0530-0607 GCT; 42°30'N, 145°51'E; 1519 02 144 15 x x 0842 3 18-07 3 x 05-02 2 4 x x.

0		17.7	33.21	5.74	0	17.7	33.21	23.99	393	0.000
10	12	17.79	33.21	5.74	10	17.80	33.21	23.96	396	0.039
24	12	17.72	33.21	5.78	25	17.25	33.22	24.11	382	0.098
49	12	6.26	33.48	6.68	50	6.15	33.48	26.35	169	0.167
73	12	4.66	33.57	6.26	75	4.60	33.57	26.60	145	0.206
106	26	4.07	33.60	5.99	100	4.20	33.60	26.68	137	0.242
159	26	2.69	33.57	5.70	150	2.95	33.57	26.77	129	0.389
210	26	2.95	33.69	4.42	200	2.90	33.68	26.86	120	0.372
319	26	3.37	33.84	2.91	300	3.30	33.80	26.92	115	0.492
428	26	3.79	34.07	1.97	400	3.70	34.00	27.04	103	0.604
534	26	3.65	34.18	1.49	500	3.70	34.15	27.16	92	0.705

OBSERVATIONS OF THE KOBE MARINE OBSERVATORY

SHUMPU MARU; August 19, 1955; 0355-0442 GCT; 33°00'N, 134°10'E; 23 06 02 292 xxxx 1841[a] 22-0 3 810-3 x 2 4 x x. 1

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ⊀°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.6	33.47	4.52	0.06	5.5	0	28.6	33.47	21.07	673	0.000
10	0	26.38	33.54	4.76	-	-	10	26.38	33.54	21.83	600	0.064
25	0	22.64	34.25	4.73	0.15	5.0	25	22.64	34.25	23.49	441	0.142
50	0	18.13	34.63	3.88	0.58	10.0	50	18.13	34.63	24.98	299	0.235
75	0	17.73	34.63	3.81	-	-	75	17.73	34.63	25.07	290	0.309
100	0	15.99	34.59	3.95	0.68	17.5	100	15.99	34.59	25.47	252	0.377
147	0	14.49	34.56	3.82	-	-	150	14.36	34.56	25.78	223	0.498
195	0	12.35	34.45	3.54	1.12	20.0	200	12.20	34.45	26.14	189	0.603
281	0	9.71	34.30	3.08	-	-	300	9.34	34.28	26.53	152	0.792
390	17	7.57	34.25	2.62	1.96	44.0	400	7.44	34.25	26.78	128	0.938
493	17	6.28	34.25	2.25	-	-	500	6.20	34.25	26.95	112	1.064
594	17	5.07	34.28	1.94	2.18	68.0	600	5.03	34.28	27.13	95	1.173
698	11	4.35	34.34	1.71	2.62	75.5						

SHUMPU MARU; August 19, 1955; 0650-1030 GCT; 32°40'N, 134°10'E; 2310 02 294 2321 2231[a] 23-0 2 1600-3 x 2 4 x x. 2

0		29.2	33.80	4.57	0.10	4.0	0	29.2	33.80	21.12	668	0.000
10	18	27.25	33.63	4.71	-	-	10	27.25	33.63	21.63	619	0.064
24	18	26.17	34.39	4.62	0.11	17.5	25	26.13	34.41	22.56	530	0.151
48	18	25.28	34.70	4.62	0.15	9.5	50	25.12	34.70	23.10	478	0.277
71	18	23.40	34.77	4.32	-	-	75	23.22	34.77	23.72	419	0.390
95	18	22.04	34.75	4.19	0.47	5.0	100	21.92	34.75	24.08	385	0.491
138	18	21.04	34.74	4.07	-	-	150	19.13	34.68	24.74	322	0.670
180	53	14.37	34.57	3.63	-	-	200	12.99	34.54	26.05	197	0.802
220	53	11.60	34.48	3.35	1.32	24.0	300	9.85	34.37	26.51	154	0.984
260	53	10.56	34.43	3.20	-	-						
326	60	9.38	34.34	2.99	1.66	34.5						

SHUMPU MARU; August 19, 1955; 1645-1810 GCT; 32°10'N, 134°10'E; 2514 01 283 2521 2531 1 x x x x 2 4 x x. 4

0		28.5	34.50	4.43	0.06	3.0	0	28.5	34.50	21.89	594	0.000
10	13	28.38	34.48	4.44	-	-	10	28.38	34.48	21.91	592	0.059
24	13	27.96	34.43	4.45	0.15	3.0	25	27.95	34.43	22.00	583	0.148
49	13	27.69	34.46	4.49	0.24	4.0	50	27.54	34.48	22.17	567	0.292
73	13	24.03	34.70	4.63	-	-	75	23.91	34.72	23.46	444	0.419
97	13	22.57	34.83	4.69	0.21	5.0	100	22.45	34.83	23.98	394	0.524
147	13	20.56	34.86	4.36	-	-	150	20.48	34.86	24.54	341	0.710
185	34	19.49	34.84	4.29	0.36	4.5	200	19.11	34.83	24.88	308	0.876
263	34	17.51	34.74	4.33	-	-	300	16.91	34.72	25.33	266	1.171
362	34	15.91	34.66	4.33	0.51	6.0	400	15.01	34.63	25.69	231	1.430
450	34	13.83	34.57	4.01	-	-	500	12.41	34.48	26.10	192	1.653
610	47	9.30	34.27	3.34	1.59	27.0	600	9.58	34.28	26.48	156	1.839
771	47	6.24	34.23	2.23	2.06	55.0	800	5.96	34.25	26.98	109	2.126
948	47	4.52	34.30	1.63	2.76	67.5	1000	4.30	34.34	27.25	83	2.338
1235	47	3.29	34.46	1.66	2.76	82.5	1200	3.44	34.45	27.43	66	2.506

a) Determined by taking bearing.

KMO

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
6		SHUMPU MARU; August 19, 1955; 2115-2208 GCT; 31°40'N, 134°10'E; 2513 02 277 2321 2533 1 37-0 2 x x 2 4 x x.										
0		28.1	34.41	4.40	0.08	4.5	0	28.1	34.41	21.95	588	0.000
10	5	28.04	34.43	4.47	-	-	10	28.04	34.43	21.98	585	0.059
25	5	27.77	34.48	4.44	0.07	4.5	25	27.77	34.48	22.11	573	0.146
50	5	25.22	34.48	4.82	0.08	4.0	50	25.22	34.48	22.91	496	0.280
75	5	22.66	34.77	5.01	-	-	75	22.66	34.77	23.88	404	0.393
100	5	21.80	34.86	4.82	0.09	4.0	100	21.80	34.86	24.20	373	0.491
151	5	20.50	34.84	4.51	-	-	150	20.53	34.84	24.52	343	0.672
191	10	19.53	34.83	4.55	0.27	5.0	200	19.40	34.83	24.80	316	0.840
294	10	18.02	34.77	4.28	-	-	300	17.91	34.77	25.14	284	1.148
396	10	16.16	34.70	4.26	0.68	10.0	400	16.08	34.70	25.52	248	1.425
498	10	14.24	34.56	4.07	-	-	500	14.18	34.56	25.83	218	1.671
605	20	10.88	34.34	3.69	1.37	20.0	600	11.04	34.36	26.29	174	1.881
802	20	6.71	34.23	2.55	2.04	50.0	800	6.75	34.23	26.86	120	2.200
992	20	4.77	34.28	1.75	2.72	65.0	1000	4.73	34.28	27.17	91	2.433
1270	20	3.34	34.43	1.52	2.80	82.0	1200	3.71	34.39	27.35	74	2.618
8		SHUMPU MARU; August 20, 1955; 0255-0352 GCT; 31°10'N, 134°10'E; 2512 02 290 2622 xxxx 2 33-0 2 x x 2 4 x x.										
0		28.2	34.39	4.42	0.00	5.0	0	28.2	34.39	21.90	593	0.000
10	0	27.40	34.36	4.49	-	-	10	27.40	34.36	22.12	572	0.058
25	0	26.92	34.34	4.50	0.00	7.0	25	26.92	34.34	22.28	557	0.143
50	0	23.08	34.72	5.12	0.37	13.0	50	23.08	34.72	23.72	419	0.265
75	0	22.03	34.81	4.96	-	-	75	22.03	34.81	24.09	384	0.366
100	0	21.21	34.86	4.68	0.35	10.0	100	21.21	34.86	24.35	359	0.460
146	0	20.04	34.84	4.51	-	-	150	19.99	34.84	24.66	329	0.634
219	25	19.22	34.84	4.65	0.08	10.0	200	19.43	34.84	24.81	315	0.798
317	25	17.70	34.75	4.30	-	-	300	17.96	34.77	25.12	286	1.107
420	25	15.93	34.65	3.93	0.87	12.5	400	16.28	34.66	25.45	254	1.388
528	25	13.53	34.52	4.14	-	-	500	14.15	34.56	25.82	219	1.638
658	28	10.12	34.32	3.46	1.60	35.0	600	11.64	34.41	26.20	183	1.853
855	28	6.29	34.25	2.27	3.45	60.0	800	7.37	34.27	26.80	126	2.188
1089	28	4.25	34.34	1.56	3.61	85.0	1000	5.03	34.30	27.14	94	2.431
1414	28	3.04	34.50	1.69	3.65	106.0	1200	3.84	34.39	27.34	75	2.621
10		SHUMPU MARU; August 20, 1955; 0730-0828 GCT; 30°40'N, 134°10'E; 2710 02 290 2721 xxxx 1 36-0 2 x x 2 4 x x.										
0		28.6	34.36	4.50	0.27	8.5	0	28.6	34.36	21.75	607	0.000
10	8	27.28	34.25	4.67	-	-	10	27.28	34.25	22.09	575	0.059
25	8	26.85	34.39	4.53	0.09	7.5	25	26.85	34.39	22.33	552	0.144
50	8	22.84	34.77	4.99	0.19	4.5	50	22.84	34.77	23.83	408	0.264
75	8	21.63	34.86	4.80	-	-	75	21.63	34.86	24.24	369	0.362
99	8	20.89	34.84	4.59	0.57	6.0	100	20.87	34.84	24.43	351	0.453
148	8	20.02	34.84	4.45	-	-	150	19.99	34.84	24.68	327	0.624
210	6	19.21	34.83	4.63	0.48	6.0	200	19.34	34.83	24.82	314	0.788
308	6	17.79	34.81	4.31	-	-	300	17.91	34.81	25.17	281	1.094
414	6	15.89	34.68	4.29	0.76	12.5	400	16.14	34.70	25.51	249	1.370
515	6	13.82	34.52	4.02	-	-	500	14.14	34.54	25.82	219	1.617
621	12	11.05	34.36	3.69	2.03	30.0	600	11.65	34.39	26.21	182	1.831
825	12	6.94	34.27	2.59	2.83	57.5	800	7.45	34.28	26.81	125	2.164
1020	12	4.39	34.34	1.62	3.65	86.5	1000	4.66	34.34	27.19	89	2.400
1305	12	3.22	34.45	1.59	3.55	102.5	1200	3.65	34.41	27.37	72	2.581

OBSERVED						
Z	W	T	S	O_2	PO_4-P	Si
m	×°	°C	‰	ml/L	µg at/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SHUMPU MARU; August 20, 1955; 1145-1245 GCT; 30°10'N, 134°10'E; 2508 00 284 2521 xxxx 1 x x x x 2 4 x x. 12

Z	W	T	S	O_2	PO_4-P	Si	Z	T	S	σ_t	δ_T	ΔD
0		28.4	34.37	4.50	0.09	6.5	0	28.4	34.37	21.82	601	0.000
10	0	27.67	34.34	4.53	-	-	10	27.67	34.34	22.03	580	0.059
25	0	26.97	34.32	4.66	0.09	5.5	25	26.97	34.32	22.24	560	0.145
50	0	23.31	34.72	5.05	0.48	9.0	50	23.31	34.72	23.65	426	0.268
75	0	22.05	34.86	4.95	-	-	75	22.05	34.86	24.12	381	0.370
100	0	21.28	34.84	4.90	0.32	6.5	100	21.28	34.84	24.32	362	0.464
151	0	20.08	34.84	4.48	-	-	150	20.10	34.84	24.63	332	0.639
200	0	19.23	34.84	4.65	0.57	7.5	200	19.23	34.84	24.86	310	0.803
296	0	17.91	34.77	4.28	-	-	300	17.84	34.77	25.15	283	1.108
400	0	16.04	34.70	4.26	0.68	11.0	400	16.04	34.70	25.53	247	1.384
507	0	14.12	34.57	4.07	-	-	500	14.25	34.57	25.84	217	1.629
597	0	11.28	34.36	3.67	1.46	30.0	600	11.21	34.36	26.26	177	1.839
804	0	6.81	34.18	2.65	2.65	53.5	800	6.90	34.18	26.81	125	2.166
1002	0	4.75	34.32	1.77	3.34	90.0	1000	4.77	34.32	27.20	88	2.402
1287	0	3.33	34.45	1.65	3.49	102.5	1200	3.77	34.41	27.36	73	2.584

SHUMPU MARU; August 20, 1955; 1600-1903 GCT; 29°40'N, 134°10'E; 2006 00 284 2021 xxxx 1 x x x x 2 3 4 x x. 14

Z	W	T	S	O_2	PO_4-P	Si	Z	T	S	σ_t	δ_T	ΔD
0		28.4	34.46	4.50	0.01	10.0	0	28.4	34.46	21.90	593	0.000
10	0	26.98	34.45	4.67	-	-	10	26.98	34.45	22.33	552	0.057
25	0	26.34	34.45	4.69	0.12	10.5	25	26.34	34.45	22.53	533	0.139
50	0	24.60	34.54	4.91	0.13	6.5	50	24.60	34.54	23.13	475	0.265
75	0	21.74	34.86	4.77	-	-	75	21.74	34.86	24.22	371	0.371
100	0	21.04	34.86	4.63	0.13	7.5	100	21.04	34.86	24.41	353	0.463
151	0	20.22	34.84	4.50	-	-	150	20.24	34.84	24.61	334	0.637
194	7	19.43	34.84	4.60	0.18	10.0	200	19.34	34.84	24.83	313	0.802
292	7	17.94	34.77	4.37	-	-	300	17.80	34.77	25.17	281	1.107
396	10	16.10	34.70	4.19	0.79	15.0	400	16.00	34.70	25.54	246	1.382
496	10	13.48	34.52	3.96	-	-	500	13.37	34.52	25.96	206	1.620
591	10	10.99	34.36	3.65	1.54	27.5	600	10.79	34.36	26.33	171	1.822
796	10	6.48	34.23	2.52	2.67	59.0	800	6.44	34.23	26.92	115	2.132
980	15	4.43	34.34	1.54	3.49	82.5	1000	4.35	34.34	27.26	82	2.350
1192	15	3.57	34.43	1.49	3.45	86.5	1200	3.55	34.43	27.40	69	2.520
1475	15	2.93	34.54	1.63	3.65	92.5	1500	2.89	34.54	27.55	55	2.734
1972	15	2.18	34.59	2.18	3.18	107.5						

SHUMPU MARU; August 21, 1955; 0035-0130 GCT; 29°00'N, 134°10'E; 2010 02 282 2021 xxxx 1 40-0 2 x x 2 4 x x. 16

Z	W	T	S	O_2	PO_4-P	Si	Z	T	S	σ_t	δ_T	ΔD
0		28.4	34.48	4.48	0.07	5.5	0	28.4	34.48	21.90	593	0.000
10	0	27.43	34.45	4.61	-	-	10	27.43	34.45	22.19	565	0.058
25	0	26.66	34.41	4.72	0.15	6.5	25	26.66	34.41	22.41	544	0.141
50	0	24.05	34.65	4.95	0.02	8.0	50	24.05	34.65	23.39	450	0.266
75	0	22.13	34.86	4.83	-	-	75	22.13	34.86	24.10	383	0.371
100	0	21.31	34.88	4.60	0.26	7.5	100	21.31	34.88	24.34	360	0.464
152	0	20.18	34.86	4.55	-	-	150	20.22	34.86	24.62	333	0.640
197	8	19.36	34.84	4.66	0.31	7.5	200	19.31	34.84	24.84	312	0.804
297	8	17.71	34.77	4.37	-	-	300	17.65	34.77	25.20	278	1.108
400	8	15.62	34.63	4.30	0.58	8.0	400	15.62	34.63	25.58	242	1.379
505	8	13.40	34.52	4.03	-	-	500	13.51	34.52	25.94	208	1.617
603	0	10.52	34.34	3.76	1.52	23.0	600	10.62	34.34	26.36	168	1.818
806	0	6.21	34.23	2.51	2.53	46.5	800	6.34	34.23	26.92	115	2.125
1000	0	4.38	34.34	1.64	3.12	70.5	1000	4.38	34.34	27.23	85	2.346
1285	0	3.20	34.50	1.64	2.71	86.0	1200	3.56	34.45	27.41	68	2.518

KMO

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
18	SHUMPU MARU; August 21, 1955; 0600-0655 GCT; 29°28'N, 133°37'E; 2009 03 294 2021 18xx 1 33-0 2 x x 2 4 x x.											
0		29.1	34.45	4.43	0.17	5.0	0	29.1	34.45	21.65	617	0.000
10	3	28.45	34.48	4.48	-	-	10	28.45	34.48	21.89	594	0.061
25	3	27.93	34.45	4.49	0.10	5.0	25	27.93	34.45	22.02	581	0.149
50	3	26.94	34.54	4.65	0.17	5.0	50	26.94	34.54	22.42	543	0.290
75	3	23.41	34.83	5.06	-	-	75	23.41	34.83	23.70	421	0.411
100	3	21.92	34.86	4.76	0.26	12.5	100	21.92	34.86	24.17	376	0.511
151	3	20.48	34.86	4.45	-	-	150	20.51	34.86	24.54	341	0.693
196	5	19.55	34.86	4.60	0.26	5.0	200	19.48	34.86	24.81	315	0.860
295	5	17.83	34.79	4.35	-	-	300	17.74	34.79	25.20	278	1.165
400	5	15.94	34.70	4.35	0.68	11.0	400	15.94	34.70	25.56	244	1.437
504	5	13.47	34.52	4.00	-	-	500	13.57	34.52	25.94	208	1.676
604	10	10.36	34.34	3.56	1.45	22.0	600	10.48	34.34	26.37	167	1.876
809	10	6.22	34.23	2.41	2.51	52.5	800	6.40	34.23	26.91	116	2.182
1004	10	4.40	34.37	1.57	2.63	71.5	1000	4.44	34.37	27.26	82	2.401
1286	10	3.20	34.52	1.58	3.14	80.0	1200	3.57	34.48	27.44	65	2.567
20	SHUMPU MARU; August 21, 1955; 1007-1112 GCT; 29°48'N, 133°13'E; 2308 01 288 2222 18x2 1 x x x x 2 4 x x.											
0		28.8	34.39	4.64	0.15	6.5	0	28.8	34.39	21.70	612	0.000
10	8	28.01	34.32	4.44	-	-	10	28.01	34.32	21.91	592	0.060
25	8	27.52	34.37	4.58	0.14	6.5	25	27.52	34.37	22.11	573	0.148
50	8	25.04	34.68	4.68	0.22	2.5	50	25.04	34.68	23.12	476	0.279
74	8	24.63	34.68	4.62	-	-	75	24.59	34.68	23.25	464	0.397
99	8	23.57	34.77	4.44	0.47	3.5	100	23.54	34.77	23.63	428	0.510
152	8	21.75	34.86	4.54	-	-	150	21.82	34.86	24.19	374	0.712
206	15	20.02	34.84	4.36	0.49	4.0	200	20.21	34.84	24.61	334	0.892
299	15	17.69	34.72	4.24	-	-	300	17.67	34.72	25.15	283	1.209
404	15	15.37	34.63	3.91	0.79	5.5	400	15.47	34.63	25.61	239	1.481
509	15	12.66	34.43	3.87	-	-	500	12.89	34.45	26.00	202	1.714
630	20	9.68	34.28	3.47	1.80	29.0	600	10.42	34.32	26.36	168	1.912
830	20	5.88	34.19	2.19	2.12	52.5	800	6.45	34.21	26.89	117	2.220
1020	20	4.01	34.32	1.46	3.06	89.5	1000	4.21	34.30	27.24	84	2.441
1304	20	3.11	34.45	1.66	2.79	80.5	1200	3.43	34.39	27.39	70	2.613
22	SHUMPU MARU; August 21, 1955; 1425-1525 GCT; 30°09'N, 132°49'E; 2010 00 284 2121 xxxx 1 x x x x 2 4 x x.											
0		28.5	34.41	4.44	0.43	2.5	0	28.5	34.41	21.81	602	0.000
10	10	28.29	34.37	4.52	-	-	10	28.29	34.37	21.87	596	0.060
25	10	28.18	34.61	4.54	0.31	1.5	25	28.18	34.61	22.07	577	0.148
49	10	27.98	34.63	4.48	0.17	1.5	50	27.88	34.63	22.17	567	0.291
74	10	25.38	34.68	4.86	-	-	75	25.29	34.68	23.04	484	0.423
99	10	23.23	34.79	4.81	0.24	2.0	100	23.20	34.79	23.73	418	0.537
149	10	21.75	34.81	4.36	-	-	150	21.72	34.81	24.18	375	0.737
205	18	20.13	34.81	4.46	0.25	2.0	200	20.28	34.81	24.56	339	0.919
301	18	17.57	34.68	4.36	-	-	300	17.60	34.68	25.15	283	1.238
402	18	15.18	34.61	4.20	0.68	5.5	400	15.23	34.61	25.65	235	1.508
505	18	12.26	34.41	3.87	-	-	500	12.42	34.43	26.09	193	1.734
597	24	9.48	34.25	3.47	1.62	30.5	600	9.42	34.25	26.48	156	1.920
780	24	5.89	34.21	2.36	2.57	57.5	800	5.72	34.21	27.00	107	2.204
960	24	4.37	34.28	1.63	3.32	75.0	1000	4.20	34.30	27.23	85	2.415
1230	24	3.21	34.43	1.61	3.40	85.5	1200	3.34	34.41	27.41	68	2.586

SHUMPU MARU; August 21, 1955; 1845-1950 GCT; 30°30'N, 132°24'E; 2310 02 285 2321 xxxx 1 x x x x 2 4 x x. 24

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ±	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.3	34.45	4.43	0.24	4.5	0	28.3	34.45	21.90	592	0.000
10	8	28.30	34.41	4.50	-	-	10	28.30	34.41	21.87	594	0.059
25	8	27.78	34.50	4.47	0.24	6.5	25	27.78	34.50	22.12	572	0.145
50	8	26.20	34.54	4.66	0.24	1.0	50	26.20	34.54	22.65	521	0.282
74	8	24.57	34.68	4.60	-	-	75	24.52	34.68	23.27	462	0.406
99	8	23.42	34.75	4.31	0.47	2.5	100	23.37	34.75	23.65	426	0.518
151	8	21.10	34.83	4.35	-	-	150	21.14	34.83	24.35	359	0.716
199	13	19.44	34.81	4.22	0.25	2.5	200	19.42	34.81	24.78	318	0.888
306	13	17.03	34.70	4.15	-	-	300	17.21	34.70	25.26	272	1.191
397	13	14.41	34.54	4.00	0.74	13.0	400	14.32	34.54	25.79	222	1.448
499	13	11.35	34.43	3.29	-	-	500	11.30	34.43	26.29	174	1.658
565	28	8.23	34.19	3.27	1.67	33.0	600	7.67	34.21	26.72	134	1.823
730	28	5.56	34.32	1.88	2.85	60.5	800	4.84	34.36	27.20	88	2.064
895	28	3.86	34.39	1.48	2.89	83.0	1000	3.59	34.41	27.38	71	2.240
1159	28	3.18	34.45	2.01	2.52	83.5						

SHUMPU MARU; August 21, 1955; 2154-2250 GCT; 30°44'N, 132°09'E; 2512 03 286 2521 xxxx 1 35-0 2 x x 2 4 x x. 25

0		28.8	34.16	4.39	0.14	6.5	0	28.8	34.16	21.52	629	0.000
10	8	28.15	34.16	4.45	-	-	10	28.15	34.16	21.73	609	0.062
25	8	27.58	34.36	4.50	0.14	5.5	25	27.58	34.36	22.08	576	0.151
50	8	26.08	34.61	4.53	0.14	1.5	50	26.08	34.61	22.73	514	0.287
74	8	24.80	34.70	4.30	-	-	75	24.77	34.70	23.21	468	0.411
99	8	23.97	34.74	4.23	0.20	1.5	100	23.93	34.74	23.48	442	0.525
153	8	22.05	34.83	4.21	-	-	150	22.16	34.83	24.07	386	0.735
208	15	19.01	34.77	4.00	0.63	10.0	200	19.45	34.77	24.75	321	0.914
301	15	15.75	34.66	3.88	-	-	300	15.79	34.66	25.57	243	1.204
422	15	11.66	34.45	3.31	1.13	22.5	400	12.40	34.48	26.13	190	1.430
506	15	9.32	34.34	2.89	-	-	500	9.49	34.34	26.55	150	1.610
574	23	7.53	34.32	2.48	2.16	47.0	600	7.14	34.32	26.88	118	1.753
750	23	4.92	34.32	1.72	2.87	73.0	800	4.58	34.36	27.23	85	1.973
927	23	3.72	34.43	1.56	2.99	77.5	1000	3.50	34.45	27.42	67	2.141
1176	23	2.96	34.50	1.82	2.57	100.0						

SHUMPU MARU; August 22, 1955; 0110-0300 GCT; 30°58'N, 131°50'E; 2910 02 286 2921 xxxx 1 31-0 2 1750-3 x 2 4 x x. 26

0		28.2	33.82	4.65	0.09	9.5	0	28.2	33.82	21.47	634	0.000
10	10	28.62	34.09	4.40	-	-	10	28.62	34.09	21.53	628	0.063
25	10	27.00	34.10	4.47	0.06	8.0	25	27.00	34.10	22.07	577	0.154
49	10	25.17	34.48	4.47	0.12	4.5	50	25.13	34.48	22.93	494	0.288
74	10	24.12	34.52	4.84	-	-	75	24.08	34.52	23.29	460	0.408
99	10	23.03	34.68	4.14	0.31	8.5	100	22.97	34.68	23.73	418	0.518
147	10	20.32	34.75	3.96	-	-	150	20.16	34.75	24.55	340	0.710
186	38	18.23	34.68	3.87	0.55	8.5	200	17.42	34.66	25.17	281	0.868
242	38	14.97	34.61	3.69	-	-	300	13.26	34.52	25.99	203	1.117
309	38	13.00	34.50	3.52	1.16	23.0	400	9.13	34.30	26.56	149	1.301
374	38	10.10	34.34	3.18	-	-	500	6.55	34.27	26.93	114	1.440
450	54	7.27	34.23	2.57	1.91	44.5	600	5.29	34.32	27.13	95	1.552
560	54	5.68	34.32	2.16	2.00	53.5	800	3.96	34.41	27.34	75	1.736
665	54	4.65	34.34	1.65	2.57	71.5						
850	54	3.70	34.43	1.63	2.06	84.5						

KMO

NORPAC

	OBSERVED							INTERPOLATED			COMPUTED		
	Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
27	SHUMPU MARU; August 22, 1955; 0450-0518 GCT; 31°13'N, 131°35'E; 2312 15 287 2522[a] 26-0 3 330-3 x 2 4 x.												
	0		28.4	34.09	4.45	0.09	6.5	0	28.4	34.09	21.61	621	0.000
	10	0	27.64	34.07	4.53	-	-	10	27.64	34.07	21.83	600	0.061
	25	0	25.45	34.43	4.59	0.11	4.5	25	25.45	34.43	22.80	507	0.144
	50	0	22.96	34.63	4.12	0.35	6.5	50	22.96	34.63	23.68	423	0.257
	75	0	20.09	34.68	3.95	-	-	75	0.09	34.68	24.51	344	0.353
	97	15	18.95	34.72	3.86	0.59	9.5	100	18.78	34.72	24.87	309	0.436
	142	15	16.40	34.63	3.77	-	-	150	16.16	34.63	25.45	254	0.578
	189	15	15.01	34.61	3.69	0.85	15.0	200	14.48	34.57	25.78	223	0.700
	269	15	11.14	34.39	3.25	-	-						
39	SHUMPU MARU; August 27-28, 1955; 2250-0005 GCT; 33°20'N, 135°40'E; 1116 00 257 1221 1242[a] 25-0 3 x x 2 4 x x.												
	0		26.4	33.76	4.63	0.02	10.5	0	26.4	33.76	22.00	583	0.000
	18	24	26.48	33.98	4.60	-	-	10	26.44	33.89	22.07	577	0.058
	32	24	22.36	34.27	4.86	0.14	17.5	25	24.42	34.12	22.86	501	0.139
	55	24	18.76	34.59	4.29	0.30	11.5	50	19.54	34.52	24.53	342	0.245
	78	24	17.04	34.61	4.03	-	-	75	17.27	34.61	25.17	281	0.323
	101	24	16.14	34.61	3.89	0.61	21.0	100	16.18	34.61	25.43	256	0.391
	143	24	13.40	34.46	3.68	-	-	150	13.13	34.46	25.98	204	0.508
	188	43	11.64	34.43	3.40	1.27	31.5	200	11.21	34.41	26.29	174	0.604
	255	43	9.24	34.28	3.03	-	-	300	8.65	34.27	26.62	143	0.768
	345	43	8.07	34.25	2.81	1.65	58.0	400	7.34	34.25	26.81	125	0.908
	433	43	6.90	34.25	2.46	-	-	500	6.21	34.27	26.97	110	1.032
	619	57	4.98	34.30	1.84	2.26	75.5	600	5.18	34.30	27.11	97	1.141
	840	57	3.87	34.37	1.58	2.37	96.0	800	4.07	34.36	27.30	79	1.330
	1055	57	3.29	34.43	1.54	2.18	101.5	1000	3.44	34.41	27.40	69	1.493
	1340	57	2.75	34.50	1.85	2.53	107.0	1200	3.02	34.46	27.48	62	1.640
40	SHUMPU MARU; August 28, 1955; 0230-0345 GCT; 33°00'N, 135°40'E; 1816 01 286 1322 1244 2 20-0 2 x x 2 4 x x.												
	0		27.8	33.98	4.51	0.06	10.0	0	27.8	33.98	21.72	610	0.000
	10	0	27.63	33.96	4.53	-	-	10	27.63	33.96	21.77	605	0.061
	25	0	26.42	33.74	4.63	0.48	8.5	25	26.42	33.74	21.98	585	0.150
	50	0	23.26	34.16	4.90	0.20	10.5	50	23.26	34.16	23.23	466	0.282
	72	17	21.18	34.43	4.51	-	-	75	20.87	34.45	24.12	381	0.388
	96	17	18.68	34.56	3.94	0.59	20.5	100	18.41	34.56	24.85	311	0.476
	135	17	16.08	34.61	3.72	-	-	150	14.61	34.56	25.71	230	0.613
	183	50	11.36	34.43	3.25	-	-	200	10.61	34.39	26.39	169	0.715
	233	50	9.16	34.32	3.01	1.56	41.0	300	7.42	34.21	26.76	130	0.869
	288	50	7.57	34.19	2.90	-	-	400	6.29	34.27	26.97	110	0.995
	378	57	6.47	34.27	2.26	2.17	59.0	500	5.45	34.28	27.08	99	1.105
	568	57	4.89	34.30	1.82	2.31	70.0	600	4.75	34.30	27.18	90	1.205
	815	57	3.79	34.36	1.60	2.18	66.5	800	3.86	34.36	27.31	78	1.386
	1166	57	2.86	34.46	1.78	2.48	116.0	1000	3.30	34.41	27.41	68	1.547

a) Determined by taking bearing.

OBSERVED						
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L

INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHUMPU MARU; August 28, 1955; 0745-0930 GCT; 32°30'N, 135°40'E; 1514 02 284 1522 1544 1 26-0 2 x x 2 4 x x. 42

0		28.6	34.16	4.44	0.07	17.5	0	28.6	34.16	21.60	622	0.000
10	13	28.66	34.14	4.43	-	-	10	28.66	34.14	21.55	626	0.062
25	13	28.65	34.16	4.41	0.07	10.0	25	28.65	34.16	21.58	624	0.156
49	13	27.77	34.28	4.51	0.20	16.5	50	27.73	34.28	21.98	585	0.308
73	30	26.83	34.36	4.40	-	-	75	26.64	34.37	22.39	546	0.450
95	30	24.71	34.61	4.22	0.35	14.5	100	24.42	34.63	23.25	464	0.577
144	30	21.87	34.74	4.05	-	-	150	21.63	34.74	24.14	379	0.790
231	38	18.35	34.74	4.03	0.62	36.0	200	19.60	34.74	24.67	328	0.970
286	38	15.88	34.61	4.17	-	-	300	15.58	34.59	25.56	244	1.264
380	38	13.89	34.54	3.65	1.12	25.5	400	13.06	34.48	25.98	204	1.497
477	38	9.88	34.27	3.51	-	-	500	9.30	34.27	26.50	154	1.686
613	53	6.48	34.23	2.69	2.00	58.0	600	6.80	34.23	26.86	120	1.832
803	53	4.77	34.28	1.66	2.33	71.0	800	4.80	34.28	27.16	92	2.062
866	55	4.43	34.34	1.62	2.38	77.0	1000	3.73	34.39	27.35	74	2.245
1122	55	3.09	34.45	1.66	2.65	105.5						

SHUMPU MARU; August 28, 1955; 1330-1455 GCT; 32°00'N, 135°40'E; 1614 02 282 1623 1633 1 x x x x 2 4 x x. 44

0		28.2	34.16	4.44	0.30	2.5	0	28.2	34.16	21.72	610	0.000
9	19	28.39	34.16	4.47	-	-	10	28.39	34.16	21.67	615	0.061
23	19	28.44	34.16	4.47	0.19	2.0	25	28.34	34.18	21.70	612	0.153
47	19	27.29	34.43	4.61	0.15	9.0	50	26.96	34.46	22.35	550	0.299
71	19	24.62	34.75	4.75	-	-	75	24.26	34.77	23.41	449	0.424
95	19	22.45	34.84	4.49	0.14	4.0	100	22.29	34.84	24.04	388	0.530
162	20	20.37	34.83	4.31	-	-	150	20.74	34.83	24.45	349	0.716
199	23	19.45	34.81	4.73	0.38	6.5	200	19.43	34.81	24.77	319	0.886
306	20	17.22	34.72	4.27	-	-	300	17.35	34.72	25.24	274	1.191
433	30	14.45	34.57	3.99	0.98	9.0	400	15.17	34.61	25.65	235	1.456
541	30	11.40	34.39	3.73	-	-	500	12.56	34.46	26.08	194	1.683
635	30	8.73	34.25	3.22	1.18	28.0	600	9.72	34.30	26.46	158	1.871
837	30	5.68	34.25	2.01	1.99	44.5	800	6.25	34.25	26.94	113	2.165
987	17	4.24	34.34	1.62	2.20	56.5	1000	4.19	34.34	27.27	81	2.379
1204	17	3.42	34.41	1.53	2.86	72.5	1200	3.44	34.41	27.40	69	2.547
1497	17	2.76	34.52	1.77	2.60	70.0	1500	2.76	34.52	27.54	56	2.762
1993	17	2.10	34.57	2.34	2.25	71.5						

SHUMPU MARU; August 28, 1955; 2015-2120 GCT; 31°30'N, 135°40'E; 1716 03 280 1622 1632 1 x x x x 2 4 x x. 46

0		28.0	34.34	4.44	0.09	1.5	0	28.0	34.34	21.92	591	0.000
10	15	27.97	34.30	4.52	-	-	10	27.97	34.30	21.91	592	0.059
24	15	27.36	34.32	4.62	0.09	1.5	25	27.25	34.34	22.16	568	0.146
48	15	24.76	34.56	4.91	0.16	1.0	50	24.56	34.57	23.17	471	0.276
72	15	22.31	34.77	4.96	-	-	75	22.22	34.77	24.01	391	0.385
97	15	21.52	34.83	4.79	0.14	4.5	100	21.45	34.83	24.27	367	0.480
148	15	20.37	34.84	4.51	-	-	150	20.34	34.84	24.58	337	0.659
207	20	19.41	34.81	4.49	0.36	7.0	200	19.53	34.81	24.76	320	0.826
298	20	18.42	34.77	4.46	-	-	300	18.38	34.77	25.02	295	1.142
403	20	16.26	34.68	4.33	0.71	6.5	400	16.33	34.68	25.46	253	1.427
505	20	14.26	34.52	4.08	-	-	500	14.36	34.52	25.76	225	1.679
676	26	9.54	34.25	3.49	1.46	17.0	600	11.64	34.37	26.16	187	1.899
880	26	6.18	34.23	2.39	0.84	36.5	800	7.50	34.23	26.76	130	2.243
1125	26	3.90	34.36	1.59	0.78	54.5	1000	5.06	34.28	27.13	95	2.492
1460	26	2.91	34.50	1.82	2.36	77.0	1200	3.68	34.39	27.36	73	2.681

KMO

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ϟ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
48	SHUMPU MARU; August 29, 1955; 0015-0125 GCT; 31°00'N, 135°40'E; 1817 15 282 1822 1834 1 33-10 2 x x 2 4 x x.											
0		28.0	34.27	4.40	0.09	4.0	0	28.0	34.27	21.87	596	0.000
14	20	27.94	34.27	4.42	-	-	10	27.96	34.27	21.88	595	0.060
28	20	27.95	34.25	4.42	0.25	4.0	25	27.95	34.25	21.87	596	0.149
52	20	25.28	34.61	4.60	0.14	4.0	50	25.50	34.57	22.90	497	0.286
75	20	22.60	34.74	4.88	-	-	75	22.60	34.74	23.86	406	0.399
99	20	21.66	34.83	4.79	0.25	4.0	100	21.63	34.83	24.22	371	0.497
150	20	20.35	34.81	4.43	-	-	150	20.35	34.81	24.54	341	0.678
213	20	19.33	34.81	4.67	0.39	4.0	200	19.54	34.81	24.75	321	0.846
308	20	18.64	34.79	4.39	-	-	300	18.70	34.79	24.96	301	1.166
414	20	16.69	34.70	4.29	0.93	6.0	400	16.96	34.72	25.33	266	1.461
520	20	14.66	34.59	4.15	-	-	500	15.05	34.61	25.68	232	1.724
702	14	9.88	34.30	3.34	1.14	20.5	600	12.56	34.46	26.06	196	1.953
903	14	6.02	34.19	2.25	1.98	50.5	800	8.00	34.25	26.69	136	2.313
1150	14	4.10	34.34	1.54	2.28	69.0	1000	5.27	34.25	27.07	100	2.574
1490	14	2.96	34.46	1.09	2.10	80.0	1200	3.93	34.36	27.31	78	2.774
50	SHUMPU MARU; August 29, 1955; 0440-0543 GCT; 30°30'N, 135°40'E; 2012 00 288 2023 2034 1 31-15 2 x x 2, 4, x, x.											
0		28.0	34.32	4.43	0.23	3.0	0	28.0	34.32	21.92	591	0.000
10	12	27.96	34.30	4.43	-	-	10	27.96	34.30	21.92	591	0.059
24	12	27.62	34.28	4.54	0.17	7.0	25	27.48	34.30	22.06	578	0.147
49	12	24.15	34.68	4.71	0.17	7.0	50	24.06	34.68	23.41	449	0.276
73	12	22.10	34.81	4.81	-	-	75	22.03	34.81	24.09	384	0.380
98	12	21.25	34.88	4.65	0.24	11.0	100	21.21	34.88	24.37	357	0.474
148	12	20.31	34.86	4.46	-	-	150	20.28	34.86	24.61	334	0.649
228	17	19.30	34.86	4.60	0.20	7.5	200	19.65	34.86	24.77	319	0.815
325	17	18.24	34.77	4.28	-	-	300	18.52	34.79	25.00	297	1.132
431	17	16.41	34.68	4.27	0.46	10.0	400	16.95	34.70	25.32	267	1.425
537	17	14.36	34.57	3.97	-	-	500	15.08	34.61	25.68	232	1.689
675	25	10.29	34.34	3.44	1.01	27.0	600	12.51	34.46	26.08	194	1.917
874	25	6.41	34.23	2.45	1.65	49.0	800	7.85	34.27	26.73	133	2.272
1068	25	4.48	34.28	1.58	2.38	60.0	1000	5.15	34.27	27.10	98	2.527
1357	25	3.18	34.45	1.58	2.23	89.5	1200	3.89	34.36	27.30	79	2.725
52	SHUMPU MARU; August 29, 1955; 1330-1435 GCT; 30°30'N, 137°00'E; 1813 02 282 1822 2233 1 x x x x 2 4 x x.											
0		28.3	34.45	4.39	0.07	6.0	0	28.3	34.45	21.91	592	0.000
10	10	28.28	34.45	4.44	-	-	10	28.28	34.45	21.91	592	0.059
25	10	28.21	34.45	4.48	0.05	6.0	25	28.21	34.45	21.93	590	0.148
49	10	27.39	34.41	4.60	0.12	6.0	50	27.25	34.41	22.23	561	0.292
74	10	23.94	34.61	5.15	-	-	75	23.87	34.61	23.41	449	0.419
99	10	22.28	34.74	4.88	0.16	6.0	100	22.25	34.74	23.98	394	0.525
151	10	20.79	34.81	4.71	-	-	150	20.82	34.81	24.42	352	0.714
245	20	18.84	34.75	4.48	0.69	5.0	200	19.78	34.77	24.68	327	0.887
305	20	17.56	34.68	4.31	-	-	300	17.67	34.68	25.14	284	1.201
405	20	15.69	34.59	4.29	0.70	7.0	400	15.78	34.59	25.51	249	1.478
516	20	13.34	34.45	3.94	-	-	500	13.69	34.46	25.86	215	1.723
657	23	9.68	34.23	3.80	1.86	25.5	600	11.16	34.32	26.22	181	1.935
852	23	5.72	34.14	2.43	2.58	60.0	800	6.78	34.16	26.79	127	2.268
1051	23	4.31	34.28	1.65	2.55	85.5	1000	4.68	34.25	27.14	94	2.511
1335	23	3.10	34.41	1.67	2.75	91.5	1200	3.67	34.36	27.33	76	2.701

OBSERVED						
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L

INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHUMPU MARU; August 29, 1955; 1730-1835 GCT; 31°00'N, 137°00'E; 2014 02 282 2022 2233 1 x x x x 54
2 4 x x.

0		28.0	34.41	4.36	0.12	4.5	0	28.0	34.41	21.98	585	0.000
10	12	28.08	34.41	4.43	-	-	10	28.08	34.41	21.96	587	0.059
25	12	27.79	34.39	4.49	0.19	7.0	25	27.79	34.39	22.03	580	0.146
49	12	26.01	34.48	4.84	0.13	6.0	50	25.89	34.48	22.70	516	0.284
74	12	22.89	34.70	4.94	-	-	75	22.84	34.70	23.78	413	0.400
99	12	21.74	34.83	4.64	0.21	6.0	100	21.71	34.83	24.20	373	0.499
148	12	20.30	34.83	4.36	-	-	150	20.26	34.83	24.59	336	0.679
200	26	19.18	34.79	4.52	0.28	5.0	200	19.18	34.79	24.83	313	0.844
286	26	17.62	34.72	4.32	-	-	300	17.39	34.70	25.22	276	1.147
390	26	15.88	34.63	4.24	0.71	7.0	400	15.64	34.61	25.56	244	1.417
492	26	13.48	34.46	3.97	-	-	500	13.26	34.45	25.93	209	1.656
598	35	10.57	34.32	3.63	1.58	23.5	600	10.53	34.32	26.36	168	1.858
786	35	6.57	34.16	2.69	2.69	55.5	800	6.44	34.16	26.86	120	2.170
973	35	4.79	34.27	1.72	3.18	80.0	1000	4.65	34.28	27.17	91	2.402
1255	35	3.30	34.43	1.58	2.65	93.0	1200	3.59	34.39	27.37	72	2.585

SHUMPU MARU; August 29, 1955; 2155-2300 GCT; 31°30'N, 137°00'E; 2012 03 279 2022 2242 1 40-13 1 x x 56
2 4 x x.

0		28.3	34.32	4.45	0.05	2.5	0	28.3	34.32	21.81	602	0.000
9	20	28.31	34.30	4.39	-	-	10	28.31	34.30	21.80	603	0.060
24	20	28.34	34.41	4.43	0.05	4.0	25	28.27	34.41	21.90	593	0.150
47	20	26.65	34.50	4.56	0.13	4.5	50	26.44	34.52	22.56	530	0.291
71	20	24.95	34.63	4.33	-	-	75	24.72	34.65	23.19	470	0.416
94	20	23.64	34.75	4.41	0.23	5.0	100	23.42	34.75	23.65	426	0.529
147	20	21.72	34.79	4.35	-	-	150	21.60	34.79	24.19	374	0.732
197	27	19.68	34.79	4.17	0.53	4.5	200	19.61	34.79	24.73	323	0.909
284	27	17.62	34.72	4.26	-	-	300	17.30	34.70	25.23	275	1.216
378	27	15.76	34.63	4.22	0.73	14.5	400	15.30	34.59	25.62	238	1.483
477	27	13.71	34.50	3.98	-	-	500	13.01	34.45	25.98	204	1.716
585	40	10.42	34.28	3.54	1.43	23.0	600	10.10	34.28	26.39	165	1.913
759	40	6.76	34.23	2.33	2.49	54.0	800	6.40	34.25	26.92	115	2.216
983	40	4.81	34.30	1.73	2.73	77.0	1000	4.73	34.30	27.18	90	2.442
1297	40	3.16	34.45	1.56	3.32	92.0	1200	3.67	34.41	27.37	72	2.624

SHUMPU MARU; August 30, 1955; 0240-0340 GCT; 32°00'N, 137°00'E; 2015 02 288 2022 2144 2 29-0 2 x x 58
2 4 x x.

0		28.6	34.21	4.38	0.12	6.0	0	28.6	34.21	21.63	619	0.000
10	15	28.64	34.19	4.42	-	-	10	28.64	34.19	21.61	621	0.062
24	15	28.61	34.23	4.44	0.19	7.5	25	28.58	34.23	21.65	617	0.155
48	15	27.98	34.36	4.49	0.14	5.0	50	27.80	34.37	22.03	580	0.305
72	15	25.78	34.63	4.45	-	-	75	25.56	34.63	22.92	495	0.440
97	15	23.94	34.68	4.28	0.30	5.5	100	23.83	34.68	23.48	442	0.558
148	15	22.02	34.79	4.21	-	-	150	21.91	34.79	24.12	381	0.766
190	20	19.82	34.79	4.15	0.41	6.0	200	19.46	34.77	24.74	322	0.945
292	20	16.18	34.65	4.19	-	-	300	15.97	34.63	25.50	249	1.238
392	20	13.59	34.50	3.76	1.45	17.5	400	13.32	34.48	25.95	207	1.476
498	20	10.03	34.27	3.53	-	-	500	9.99	34.27	26.41	163	1.671
617	14	7.38	34.27	2.56	2.24	48.0	600	7.76	34.27	26.75	131	1.828
793	14	4.86	34.23	1.79	2.90	76.5	800	4.82	34.25	27.12	96	2.074
973	14	3.90	34.34	1.53	3.24	94.0	1000	3.81	34.36	27.31	78	2.266
1236	14	3.04	34.43	1.65	3.76	102.5	1200	3.16	34.41	27.43	66	2.427

60

SHUMPU MARU; August 30, 1955; 0715-0900 GCT; 32°30'N, 137°00'E; 2313 02 283 xxxx 2333 1 27-10 2 x x 2 4 x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ϟ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.4	34.16	4.38	0.01	5.5	0	28.4	34.16	21.66	616	0.000
10	5	28.43	34.16	4.38	-	-	10	28.43	34.16	21.65	617	0.062
25	5	28.46	34.19	4.43	0.01	3.5	25	28.46	34.19	21.66	616	0.154
50	5	27.63	34.36	4.52	0.01	4.0	50	27.63	34.36	22.06	578	0.304
75	5	26.01	34.63	4.46	-	-	75	26.01	34.63	22.77	510	0.440
100	5	23.60	34.72	4.24	0.05	7.0	100	23.60	34.72	23.56	434	0.559
149	5	18.16	34.70	3.79	-	-	150	18.13	34.70	25.03	294	0.744
173	30	17.43	34.68	3.95	0.29	8.0	200	15.67	34.61	25.53	247	0.882
225	30	14.05	34.54	3.63	-	-	300	11.46	34.36	26.22	181	1.102
289	30	11.96	34.39	3.50	0.93	23.5	400	8.67	34.28	26.63	142	1.271
352	30	9.09	34.23	3.31	-	-	500	6.70	34.23	26.88	118	1.409
397	45	8.73	34.28	2.86	1.58	45.0	600	5.34	34.28	27.08	99	1.524
483	45	6.97	34.23	2.52	1.73	50.0						
568	45	5.64	34.27	2.05	1.94	60.5						
705	45	4.35	34.32	1.73	2.57	88.0						

62

SHUMPU MARU; August 30, 1955; 1225-1338 GCT; 33°00'N, 137°00'E; 2004 13 275 xxxx 2332 1 x x x x 2 4 x x.

0		27.1	33.69	5.02	0.02	4.5	0	27.1	33.69	21.74	608	0.000
10	0	27.24	33.71	5.19	-	-	10	27.24	33.71	21.70	612	0.061
25	0	25.72	33.98	5.22	0.01	4.0	25	25.72	33.98	22.38	547	0.148
50	0	20.09	34.52	5.46	0.03	6.5	50	20.09	34.52	24.40	354	0.261
75	0	17.67	34.59	4.58	-	-	75	17.67	34.59	25.06	291	0.342
100	0	15.98	34.57	4.17	0.61	8.5	100	15.98	34.57	25.45	254	0.411
150	0	12.77	34.46	4.03	-	-	150	12.77	34.46	26.05	197	0.527
199	10	10.56	34.36	3.61	1.11	26.5	200	10.53	34.36	26.38	166	0.620
289	10	7.73	34.27	2.86	-	-	300	7.56	34.27	26.78	128	0.772
397	10	6.10	34.27	2.71	2.11	55.5	400	6.07	34.27	26.99	108	0.896
498	10	5.08	34.27	2.40	-	-	500	5.07	34.27	27.11	97	1.004
600	20	4.34	34.34	1.85	2.56	81.5	600	4.34	34.34	27.24	84	1.099
788	20	3.58	34.36	1.67	2.59	99.5	800	3.55	34.36	27.35	74	1.268
976	20	3.12	34.45	1.94	3.43	103.0	1000	3.07	34.45	27.47	62	1.417
1251	20	2.60	34.52	2.25	2.59	101.0	1200	2.70	34.50	27.54	56	1.549

64

SHUMPU MARU; August 30, 1955; 1700-1805 GCT; 33°30'N, 137°00'E; 2012 60 277 2021 2332 1 x x x x 2 4 x x.

0		26.8	33.92	4.95	0.04	5.0	0	26.8	33.92	22.00	583	0.000
10	15	26.98	33.98	4.83	-	-	10	26.98	33.98	21.99	584	0.058
24	15	25.01	34.12	5.06	0.01	4.5	25	24.70	34.14	22.80	507	0.140
48	15	17.52	34.56	4.71	0.14	9.0	50	17.34	34.56	25.11	287	0.240
72	15	15.37	34.54	4.38	-	-	75	15.11	34.54	25.61	239	0.306
97	15	13.24	34.48	3.88	0.64	18.0	100	13.09	34.48	26.00	202	0.362
147	15	10.68	34.37	3.62	-	-	150	10.60	34.37	26.42	162	0.454
217	23	8.76	34.32	3.35	1.75	40.0	200	9.23	34.34	26.59	146	0.533
307	23	7.21	34.25	2.74	-	-	300	7.33	34.25	26.81	125	0.673
411	23	5.71	34.23	2.67	1.85	59.0	400	5.87	34.23	26.99	108	0.795
514	23	4.77	34.30	2.19	-	-	500	4.90	34.28	27.15	93	0.901
686	30	3.93	34.36	2.15	2.40	83.0	600	4.35	34.34	27.24	84	0.994
890	30	3.32	34.45	1.94	2.08	88.0	800	3.59	34.41	27.38	71	1.160
1133	30	2.88	34.46	2.47	2.32	100.0	1000	3.12	34.45	27.47	62	1.306
1465	30	2.38	34.56	2.57	2.17	102.5	1200	2.78	34.48	27.52	58	1.441

OBSERVED						
Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L

INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHUMPU MARU; August 30, 1955; 2135-2245 GCT; 34°00'N, 137°00'E; 2321 15 271 2322 xxxx 1 27-13 3 x x 2 4 x x. 66

Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L
0		26.3	33.89	4.62	0.07	5.0
14	23	26.43	33.89	4.59	-	-
28	23	26.39	33.91	4.59	0.02	5.0
51	23	20.01	34.48	4.56	0.22	8.5
74	23	17.75	34.59	3.92	-	-
97	23	15.61	34.56	3.88	0.43	15.5
146	23	12.69	34.45	3.54	-	-
218	34	9.85	34.32	3.15	1.21	32.5
308	34	7.83	34.23	2.75	-	-
415	34	6.33	34.27	2.32	2.04	58.5
519	34	5.47	34.27	2.08	-	-
841	47	3.77	34.37	1.56	2.42	91.0
1046	47	3.18	34.48	1.56	2.51	100.0
1291	47	2.73	34.50	1.78	2.79	103.0
1628	47	2.32	34.56	2.18	2.57	104.0

Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	26.3	33.89	22.12	572	0.000
10	26.39	33.89	22.10	574	0.057
25	26.40	33.91	22.11	573	0.143
50	20.29	34.46	24.29	365	0.261
75	17.66	34.59	25.06	291	0.344
100	15.43	34.56	25.55	245	0.411
150	12.53	34.45	26.07	195	0.523
200	10.56	34.36	26.37	167	0.616
300	8.01	34.23	26.70	135	0.772
400	6.54	34.27	26.93	114	0.902
500	5.63	34.27	27.04	103	1.016
600	5.04	34.30	27.13	95	1.121
800	3.99	34.36	27.30	79	1.308
1000	3.31	34.46	27.45	64	1.466
1200	2.90	34.50	27.52	58	1.604
1500	2.48	34.54	27.59	51	1.793

SHUMPU MARU; September 3, 1955; 0120-0235 GCT; 34°20'N, 137°38'E; 3217 02 259 3221 1552 1 23-10 4 1240-3 x 2 3 4 x x. 68

Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L
0		26.1	33.56	5.01	0.01	2.5
9	23	26.45	33.85	4.96	-	-
23	23	26.07	34.01	5.00	0.14	5.5
46	23	17.91	34.63	4.44	0.54	8.0
69	23	15.78	34.59	4.14	-	-
92	23	14.50	34.54	4.07	0.50	18.5
138	23	12.75	34.45	3.83	-	-
219	42	11.24	34.41	3.68	1.16	24.5
295	42	9.13	34.32	3.21	-	-
394	42	7.62	34.25	2.92	1.77	46.0
486	42	6.26	34.23	2.35	-	-
570	40	5.49	34.27	2.16	2.26	57.5
747	40	4.34	34.32	1.75	2.45	78.5
934	40	3.90	34.37	1.70	2.77	68.0
1267	40	3.07	34.45	-	3.13	110.5

Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	26.1	33.56	21.95	588	0.000
10	26.42	33.87	22.07	577	0.085
25	25.36	34.07	22.54	532	0.169
50	17.54	34.63	25.11	287	0.271
75	15.45	34.57	25.57	243	0.338
100	14.20	34.52	25.80	221	0.397
150	12.53	34.45	26.07	195	0.502
200	11.60	34.41	26.24	179	0.598
300	9.05	34.32	26.60	145	0.766
400	7.53	34.25	26.77	129	0.904
500	6.13	34.23	26.96	111	1.026
600	5.29	34.28	27.09	98	1.138
800	4.22	34.34	27.26	82	1.332
1000	3.74	34.39	27.35	74	1.503
1200	3.24	34.43	27.42	67	1.661

SHUMPU MARU; September 3, 1955; 0435-0539 GCT; 34°00'N, 137°38'E; 3216 02 267 3222 xxxx 1 25-3 x x 2 3 4 x x. 69

Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L
0		26.5	33.78	4.91	0.01	2.5
12	20	26.70	33.78	4.83	-	-
26	20	22.38	34.28	4.58	0.04	4.0
50	20	19.10	34.57	5.22	0.30	8.5
73	20	17.46	34.63	4.49	-	-
97	20	15.50	34.65	4.10	0.65	10.0
147	20	13.17	34.50	3.86	-	-
211	29	10.58	34.39	3.42	1.23	24.0
301	29	8.21	34.27	3.03	-	-
404	29	6.83	34.27	2.60	1.99	38.0
511	29	5.65	34.27	2.20	-	-
672	27	4.36	34.30	1.76	2.32	56.5
870	27	3.58	34.41	1.65	2.87	64.5
1113	27	3.14	34.45	1.77	2.73	89.0
1448	27	2.54	34.54	2.07	2.61	90.0

Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	26.5	33.78	21.99	584	0.000
10	26.67	33.78	21.93	590	0.059
25	22.69	34.25	23.47	443	0.136
50	19.10	34.57	24.69	327	0.233
75	17.30	34.63	25.18	281	0.309
100	15.36	34.65	25.63	237	0.375
150	13.05	34.50	26.01	201	0.486
200	11.03	34.41	26.33	171	0.581
300	8.24	34.27	26.69	136	0.740
400	6.89	34.27	26.88	118	0.872
500	5.77	34.27	27.02	105	0.990
600	4.94	34.28	27.14	94	1.095
800	3.86	34.37	27.32	77	1.279
1000	3.34	34.43	27.42	67	1.438
1200	2.98	34.46	27.49	61	1.582

KMO

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W x°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
71	SHUMPU MARU; September 3, 1955; 0850-1230 GCT; 33°30'N, 137°38'E; 2708 02 262 2721 xxxx 1 20-0 2 x x 2 3 4 x x.											
0		26.0	33.91	4.96	0.05	4.5	0	26.0	33.91	22.23	561	0.000
10	0	25.96	33.91	5.00	-	-	10	25.96	33.91	22.25	559	0.056
25	0	20.54	34.46	5.50	0.05	4.5	25	20.54	34.46	24.23	370	0.126
50	0	17.21	34.57	4.27	0.61	6.0	50	17.21	34.57	25.15	283	0.208
75	0	15.80	34.57	4.23	-	-	75	15.80	34.57	25.50	249	0.275
100	0	14.66	34.54	4.28	0.83	11.5	100	14.66	34.54	25.71	230	0.335
147	5	12.60	34.45	3.75	-	-	150	12.48	34.45	26.09	193	0.443
196	5	10.59	34.36	3.52	1.37	31.0	200	10.49	34.36	26.38	166	0.535
288	5	8.18	34.27	2.96	-	-	300	7.99	34.27	26.72	134	0.689
393	10	6.47	34.23	2.46	1.99	49.0	400	6.39	34.23	26.92	115	0.819
495	10	5.34	34.27	2.04	-	-	500	5.30	34.27	27.08	99	0.932
592	10	4.47	34.28	1.80	1.99	68.5	600	4.44	34.28	27.20	88	1.030
794	10	3.71	34.36	1.63	2.28	81.0	800	3.69	34.36	27.33	76	1.205
1000	3	3.14	34.41	1.78	2.35	88.0	1000	3.14	34.41	27.43	66	1.361
1218	3	2.78	34.50	1.95	2.63	94.0	1200	2.81	34.50	27.52	58	1.501
1505	3	2.41	34.54	2.23	2.77	101.5	1500	2.42	34.54	27.59	51	1.689
2000	3	1.94	34.59	2.84	2.53	98.5	2000	1.94	34.59	27.67	43	1.967
73	SHUMPU MARU; September 3, 1955; 1625-1733 GCT; 33°00'N, 137°38'E; 2304 02 256 xxxx 0941 1 x x x x 2 3 4 x x.											
0		26.2	33.92	4.85	0.03	6.0	0	26.2	33.92	22.19	565	0.000
10	0	26.45	33.89	4.84	-	-	10	26.45	33.89	22.08	576	0.057
25	0	25.99	33.92	4.83	0.17	6.0	25	25.99	33.92	22.25	559	0.142
50	0	19.37	34.54	5.28	0.23	6.5	50	19.37	34.54	24.59	336	0.255
75	0	16.70	34.59	4.22	-	-	75	16.70	34.59	25.30	268	0.331
100	0	15.09	34.57	4.07	0.91	15.0	100	15.09	34.57	25.65	235	0.394
144	0	11.97	34.41	3.63	-	-	150	11.72	34.39	26.21	182	0.500
191	15	10.02	34.34	3.41	1.70	27.0	200	9.82	34.34	26.48	156	0.587
285	15	7.94	34.27	2.89	-	-	300	7.68	34.27	26.76	130	0.734
393	15	6.07	34.23	2.47	2.55	53.0	400	6.00	34.23	26.98	109	0.859
497	15	5.02	34.25	1.95	-	-	500	4.99	34.25	27.10	98	0.968
597	13	4.18	34.32	1.74	2.87	74.0	600	4.17	34.32	27.25	83	1.064
803	13	3.38	34.43	1.67	3.26	79.0	800	3.39	34.43	27.42	67	1.225
1002	13	2.91	34.46	1.80	2.87	88.0	1000	2.91	34.46	27.49	61	1.366
1295	13	2.54	34.50	2.05	3.08	92.0	1200	2.66	34.48	27.53	57	1.498
75	SHUMPU MARU; September 3, 1955; 2047-2200 GCT; 32°30'N, 137°38'E; 0902 02 258 xxxx 0941 1 33-5 2 x x 2 3 4 x x.											
0		27.3	34.12	4.75	0.02	5.0	0	27.3	34.12	22.00	583	0.000
10	8	27.51	34.07	4.73	-	-	10	27.51	34.07	21.88	595	0.059
25	8	27.28	34.03	4.74	0.02	5.0	25	27.28	34.03	21.93	590	0.148
50	8	24.47	34.45	4.66	0.23	5.5	50	24.47	34.45	23.11	477	0.282
74	8	21.69	34.70	4.23	-	-	75	21.60	34.70	24.12	381	0.389
99	8	19.55	34.59	4.43	0.46	6.0	100	19.45	34.59	24.60	335	0.480
144	8	14.97	34.54	3.97	-	-	150	14.56	34.52	25.72	229	0.623
177	37	12.72	34.45	3.71	1.16	21.5	200	11.56	34.41	26.23	180	0.727
228	37	10.14	34.36	3.48	-	-	300	8.32	34.25	26.65	140	0.892
309	37	8.09	34.23	3.02	2.10	39.0	400	6.35	34.21	26.91	116	1.026
373	37	6.72	34.23	2.57	-	-	500	5.35	34.25	27.06	101	1.140
411	57	6.20	34.19	2.34	2.42	50.5	600	4.64	34.36	27.30	79	1.235
502	57	5.33	34.25	1.98	2.63	59.5						
600	57	4.64	34.36	1.75	2.85	67.0						
750	57	3.76	34.39	1.67	2.87	72.5						

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ✲°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHUMPU MARU; September 4, 1955; 0130-0240 GCT; 32°00'N, 137°38'E; 0910 02 272 0921 0942 1 33-5 2 x x 2 3 4 x x. 77

0		28.1	34.18	4.66	0.01	4.5	0	28.1	34.18	21.77	605	0.000
10	12	28.04	34.16	4.66	-	-	10	28.04	34.16	21.78	604	0.060
24	12	28.06	34.16	4.68	0.05	4.5	25	28.06	34.16	21.78	604	0.151
49	12	28.05	34.34	4.67	0.12	5.5	50	28.01	34.34	21.93	590	0.301
74	12	26.95	34.56	4.74	-	-	75	26.82	34.56	22.47	538	0.442
98	12	23.89	34.74	4.52	0.24	5.5	100	23.77	34.74	23.54	436	0.565
143	12	21.21	34.83	4.42	-	-	150	20.92	34.81	24.40	354	0.765
236	30	17.35	34.70	4.46	0.43	6.5	200	18.84	34.75	24.88	307	0.933
328	30	13.86	34.50	4.20	-	-	300	14.92	34.57	25.67	233	1.211
417	30	10.48	34.30	4.62	1.45	28.5	400	11.13	34.34	26.26	177	1.420
520	30	8.43	34.30	4.94	-	-	500	8.83	34.30	26.62	143	1.589
613	27	6.51	34.23	4.46	2.92	50.0	600	6.78	34.25	26.87	119	1.729
783	27	4.64	34.30	1.82	3.16	61.5	800	4.56	34.30	27.20	88	1.953
985	27	3.68	34.39	1.58	3.38	73.5	1000	3.63	34.39	27.37	72	2.129
1265	27	2.84	34.46	1.87	3.35	81.0	1200	3.04	34.45	27.46	63	2.280

SHUMPU MARU; September 4, 1955; 1527-1624 GCT; 31°10'N, 138°15'E; 0511 03 274 0521 0941 1 x x x x 2 4 x x. 85

0		27.8	34.23	4.52	0.01	4.5	0	27.8	34.23	21.91	592	0.000
10	0	27.97	34.27	4.60	-	-	10	27.97	34.27	21.89	594	0.059
25	0	27.95	34.25	4.63	0.07	5.0	25	27.95	34.25	21.88	595	0.149
50	0	27.85	34.30	4.62	0.06	7.5	50	27.85	34.30	21.95	588	0.297
75	0	25.73	34.63	4.86	-	-	75	25.73	34.63	22.87	500	0.433
100	0	24.17	34.70	4.43	0.08	6.0	100	24.17	34.70	23.39	450	0.553
152	0	22.25	34.81	4.80	-	-	150	22.32	34.81	24.01	391	0.766
192	6	20.74	34.79	4.60	0.08	7.5	200	20.54	34.79	24.48	347	0.953
295	6	18.16	34.68	4.46	-	-	300	18.03	34.68	25.01	296	1.283
400	6	15.43	34.56	4.35	0.50	13.0	400	15.43	34.56	25.56	244	1.564
503	6	12.65	34.37	4.00	-	-	500	12.73	34.37	25.97	205	1.801
600	5	9.73	34.19	3.52	1.49	36.5	600	9.73	34.19	26.39	165	1.998
802	5	5.45	34.19	2.03	2.34	65.0	800	5.49	34.19	27.00	107	2.291
1006	5	4.13	34.30	1.63	3.04	79.0	1000	4.17	34.30	27.23	85	2.501
1289	5	3.03	34.43	1.79	2.44	90.5	1200	3.38	34.39	27.38	71	2.675

SHUMPU MARU; September 4, 1955; 1950-2120 GCT; 31°32'N, 138°15'E; 0515 00 269 0521 0941 1 30-5 2 x x 2 4 x x. 87

0		28.0	34.25	4.42	0.00	6.0	0	28.0	34.25	21.86	597	0.000
10	8	28.04	34.19	4.52	-	-	10	28.04	34.19	21.81	602	0.059
25	8	28.07	34.19	4.55	0.02	5.0	25	28.07	34.19	21.79	603	0.150
50	8	27.86	34.10	4.56	0.04	5.5	50	27.86	34.10	21.80	603	0.302
74	8	27.54	34.39	4.66	-	-	75	27.54	34.39	22.16	568	0.449
99	8	25.45	34.56	4.40	0.03	7.0	100	25.45	34.56	22.91	496	0.582
156	17	22.19	34.68	4.20	-	-	150	22.53	34.66	23.84	408	0.811
203	17	19.59	34.68	4.09	0.40	7.0	200	19.76	34.68	24.61	334	1.000
300	17	15.64	34.57	4.14	-	-	300	15.64	34.57	25.53	247	1.298
404	16	12.07	34.39	3.56	0.88	23.5	400	12.21	34.39	26.11	192	1.527
499	16	8.94	34.25	3.19	-	-	500	8.92	34.25	26.56	149	1.707
593	16	6.94	34.25	2.56	1.57	55.5	600	6.86	34.25	26.87	119	1.850
760	16	4.99	34.28	1.90	2.13	73.5	800	4.67	34.28	27.16	92	2.079
880	23	4.04	34.28	1.67	2.48	81.0	1000	3.60	34.36	27.33	76	2.264
1050	23	3.42	34.37	1.60	2.44	105.0	1200	3.05	34.43	27.45	64	2.420
1290	23	2.82	34.46	1.76	2.64	96.5	1500	2.53	34.50	27.55	55	2.624
1669	23	2.29	34.52	2.31	2.25	97.0						

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OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ϟ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
89	SHUMPU MARU; September 5, 1955; 0050-0217 GCT; 32°00'N, 138°15'E; 0714 02 280 0721 0942 1 33-9 2 x x 2 4 x x.											
0		28.0	34.21	4.46	0.02	7.0	0	28.0	34.21	21.83	600	0.000
19	15	28.07	34.25	4.50	-	-	10	28.04	34.23	21.83	600	0.060
34	15	28.10	34.25	4.39	0.02	8.0	25	28.08	34.25	21.83	600	0.150
58	15	27.00	34.52	4.63	0.02	10.0	50	27.37	34.43	22.20	564	0.296
82	15	25.61	34.65	4.56	-	-	75	26.02	34.61	22.76	511	0.431
107	15	23.10	34.65	4.30	0.18	11.5	100	23.80	34.65	23.45	445	0.551
144	15	19.23	34.65	3.94	-	-	150	19.08	34.65	24.75	321	0.745
188	27	18.13	34.68	4.00	0.48	18.5	200	17.35	34.65	25.17	281	0.898
277	27	12.37	34.43	3.55	1.13	37.0	300	10.57	34.32	26.34	170	1.130
286	27	11.02	34.34	3.38	-	-	400	7.71	34.21	26.72	134	1.289
373	27	8.23	34.25	2.91	1.66	43.5	500	6.18	34.18	26.89	117	1.421
463	27	6.50	34.14	2.56	-	-	600	5.32	34.25	27.06	101	1.537
592	40	5.39	34.25	1.90	2.54	77.0	800	3.97	34.32	27.27	81	1.733
688	40	4.55	34.25	1.80	2.88	83.0						
830	40	3.82	34.34	1.60	2.04	88.0						
91	SHUMPU MARU; September 5, 1955; 0650-0800 GCT; 32°37'N, 138°15'E; 0214 03 274 0521 0942 1 26-7 2 x x 2 4 x x.											
0		26.9	33.67	4.64	0.05	7.5	0	26.9	33.67	21.78	604	0.000
10	10	27.06	33.67	4.67	-	-	10	27.06	33.67	21.72	610	0.061
25	10	26.25	33.74	4.78	0.09	6.5	25	26.25	33.74	22.03	580	0.150
49	10	20.38	34.45	4.90	0.06	8.5	50	20.26	34.45	24.29	365	0.269
74	10	17.42	34.54	3.97	-	-	75	17.37	34.54	25.09	288	0.351
99	10	16.23	34.54	3.80	0.54	12.0	100	16.16	34.54	25.37	262	0.420
147	10	12.77	34.43	3.57	-	-	150	12.59	34.43	26.05	197	0.537
191	28	10.11	34.30	3.15	1.18	35.0	200	9.83	34.28	26.45	159	0.628
263	28	7.85	34.23	2.85	-	-	300	7.27	34.19	26.77	129	0.776
361	28	6.30	34.16	2.33	1.99	60.0	400	5.89	34.19	26.96	111	0.902
458	28	5.29	34.27	1.97	-	-	500	5.02	34.28	27.13	95	1.010
730	46	3.55	34.34	1.59	2.60	86.5	600	4.38	34.30	27.21	87	1.106
950	46	3.02	34.46	1.66	2.46	90.5	800	3.38	34.37	27.37	72	1.276
1173	46	2.71	34.48	1.84	2.48	97.0	1000	2.95	34.46	27.49	61	1.422
1487	46	2.28	34.54	2.28	2.34	97.5	1200	2.67	34.48	27.54	56	1.553
93	SHUMPU MARU; September 5, 1955; 1550-1700 GCT; 33°10'N, 138°15'E; 0910 03 272 0921 0941 1 x x x x 2 4 x x.											
0		26.9	33.98	4.66	0.03	13.0	0	26.9	33.98	22.01	582	0.000
15	12	26.52	33.94	4.70	-	-	10	26.65	33.96	22.07	577	0.058
29	12	20.06	34.50	4.72	0.02	11.0	25	21.91	34.34	23.74	417	0.133
54	12	17.68	34.56	4.08	0.24	16.0	50	18.06	34.56	24.93	304	0.223
78	12	15.84	34.56	4.21	-	-	75	16.07	34.56	25.41	258	0.294
102	12	14.61	34.50	3.92	0.75	23.0	100	14.71	34.50	25.68	232	0.356
151	12	12.37	34.39	3.64	-	-	150	12.42	34.39	26.06	196	0.464
197	25	10.58	34.30	3.35	1.43	26.5	200	10.49	34.30	26.35	169	0.558
278	25	8.22	34.25	2.95	-	-	300	7.76	34.25	26.73	133	0.713
378	25	6.15	34.21	2.32	2.45	53.5	400	5.97	34.21	26.96	111	0.841
480	25	5.30	34.23	2.16	-	-	500	5.16	34.23	27.07	100	0.952
657	25	4.06	34.30	1.61	2.67	77.5	600	4.46	34.28	27.19	90	1.052
852	25	3.39	34.39	1.59	2.67	85.0	800	3.57	34.37	27.35	74	1.227
1095	25	2.92	34.43	1.80	2.64	94.5	1000	3.10	34.41	27.43	66	1.380
1428	25	2.48	34.48	2.08	2.67	98.5	1200	2.78	34.45	27.49	61	1.522

SHUMPU MARU; September 5, 1955; 2122-2215 GCT; 33°40'N, 138°15'E; 1416 80 261 1121 0941 1 21-0 3 x x 2 4 x x. 95

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ±°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		26.7	34.03	4.62	0.04	5.5	0	26.7	34.03	22.11	573	0.000
10	4	25.93	34.14	4.75	-	-	10	25.93	34.14	22.43	542	0.056
25	4	21.29	34.52	4.46	0.16	11.0	25	21.29	34.52	24.08	385	0.125
50	4	19.25	34.61	4.21	0.34	10.0	50	19.25	34.61	24.67	328	0.215
75	4	16.96	34.56	4.10	-	-	75	16.96	34.56	25.20	278	0.291
100	4	16.26	34.54	4.07	0.64	19.0	100	16.26	34.54	25.35	264	0.359
151	4	14.10	34.48	4.13	-		150	14.14	34.48	25.78	223	0.483
198	15	10.65	34.28	3.78	1.28	27.0	200	10.60	34.28	26.32	172	0.584
292	15	8.12	34.25	2.89	-	-	300	8.03	34.25	26.70	135	0.742
398	15	6.93	34.21	2.57	2.15	51.0	400	6.90	34.21	26.83	123	0.877
501	15	5.63	34.25	2.17	-	-	500	5.64	34.25	27.03	104	0.996
611	25	4.65	34.30	1.75	2.67	77.0	600	4.75	34.30	27.17	91	1.100
807	25	3.68	34.39	1.58	2.59	87.5	800	3.71	34.39	27.35	74	1.277
1008	25	3.20	34.45	1.61	3.20	86.5	1000	3.23	34.45	27.45	64	1.428

SHUMPU MARU; September 6, 1955; 0200-0307 GCT; 34°10'N, 138°15'E; 0717 63 252 0922 0942 1 22-10 3 1400-3 x 2 4 x x. 97

0		27.0	32.93	4.58	0.07	18.0	0	27.0	32.93	21.19	661	0.000
17	32	26.43	34.12	4.73	-	-	10	26.66	33.63	21.82	601	0.063
30	32	25.10	34.30	4.79	0.02	21.0	25	25.61	34.23	22.60	526	0.148
51	32	21.72	34.56	4.41	0.06	13.5	50	21.88	34.54	23.93	399	0.264
72	32	20.79	34.63	4.39	-	-	75	20.60	34.63	24.34	360	0.359
93	32	19.46	34.59	4.38	0.25	13.5	100	18.50	34.57	24.84	312	0.444
117	32	16.18	34.56	4.05	-	-	150	14.77	34.50	25.63	237	0.583
235	48	11.15	34.34	3.93	0.89	38.0	200	12.64	34.41	26.00	202	0.695
313	48	9.42	34.23	3.64	-	-	300	9.71	34.25	26.44	160	0.882
412	48	7.32	34.25	2.69	1.84	60.5	400	7.57	34.25	26.77	129	1.033
509	48	5.98	34.27	2.22	-	-	500	6.24	34.27	26.96	111	1.160
648	60	5.17	34.30	2.15	2.41	72.0	600	5.45	34.28	27.09	98	1.271
815	60	4.34	34.32	1.87	2.55	86.0	800	4.41	34.32	27.22	86	1.470
1073	60	3.47	34.39	1.80	2.43	62.0	1000	3.72	34.39	27.34	75	1.647

SHUMPU MARU; August 17, 1955; 1520-1550 GCT; 33°14'N, 133°25'E; 3206 02 275 xxxx xxxx[a] x x x 20-10 2 4 x x. 101

0		28.6	33.22	4.46	0.00	6.5	0	28.6	33.22	20.88	691	0.000
10	0	28.61	33.20	4.50	0.07	5.0	10	28.61	33.20	20.86	693	0.069
25	0	27.38	33.33	4.60	0.09	6.0	25	27.38	33.33	21.37	644	0.171
50	0	24.00	33.92	4.91	0.00	4.5	50	24.00	33.92	22.85	502	0.314
75	0	18.28	34.56	4.03	0.75	5.0	75	18.28	34.56	24.89	308	0.416

a) Determined by taking bearing.

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OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T $10^{-5}cm^3/g$	ΔD dyn.m
102	SHUMPU MARU; August 17, 1955; 1216-1255 GCT; 33°10'N, 133°32'E; 2304 02 276 xxxx 1821[a] x x 280-3 9-11 2 4 x x.											
0		27.9	33.74	4.52	0.00	6.0	0	27.9	33.76	21.51	630	0.000
10	0	27.28	33.71	4.60	-	-	10	27.28	33.71	21.69	613	0.062
25	0	26.63	33.63	4.65	0.00	5.0	25	26.63	33.63	21.84	599	0.153
50	0	20.74	34.41	4.68	0.05	5.0	50	20.74	34.41	24.14	379	0.276
75	0	17.29	34.57	3.93	-	-	75	17.29	34.57	25.14	284	0.359
100	0	15.64	34.57	3.84	0.41	12.5	100	15.64	34.57	25.53	247	0.426
142	0	13.57	34.50	3.66	-	-	150	13.36	34.48	25.95	207	0.541
201	0	12.02	34.43	3.43	1.10	25.0	200	12.05	34.43	26.17	186	0.642
103	SHUMPU MARU; August 17, 1955; 0657-0905 GCT; 33°04'N, 133°36'E; 2305 02 282 xxxx 1621[a] 22-0 3 x 07-12 2 4 x x.											
0		28.4	33.54	4.52	0.01	9.0	0	28.4	33.54	21.20	660	0.000
10	16	26.83	33.78	4.65	-	-	10	26.83	33.78	21.88	595	0.063
24	16	23.60	34.05	4.92	0.10	10.0	25	23.40	34.07	23.12	476	0.143
48	16	18.90	34.36	4.11	0.57	5.5	50	18.85	34.37	24.61	334	0.245
72	16	18.25	34.57	3.93	-	-	75	18.02	34.57	24.96	301	0.325
96	16	16.39	34.57	3.77	0.83	10.0	100	16.15	34.57	25.40	259	0.395
140	16	13.71	34.50	3.69	-	-	150	13.44	34.50	25.93	209	0.514
182	24	12.57	34.46	3.48	1.27	22.5	200	11.98	34.43	26.17	186	0.615
282	30	9.29	34.30	2.98	-	-	300	8.98	34.30	26.59	146	0.787
376	30	7.69	34.27	2.65	1.88	45.0	400	7.51	34.25	26.78	128	0.930
393	35	7.61	34.25	2.64	2.15	58.0	500	6.24	34.27	26.97	110	1.056
477	35	6.45	34.27	2.42	1.91	67.5						
576	35	5.52	34.28	-	-	-						
104	SHUMPU MARU; August 17, 1955; 0340-0539 GCT; 32°59'N, 133°41'E; 0906 02 273 0920 0721[a] 26-0 3 x 07-10 2 4 x x.											
0		28.8	33.63	4.47	0.09	5.0	0	28.8	33.63	21.13	667	0.000
10	0	28.03	33.63	4.50	-	-	10	28.03	33.63	21.39	642	0.065
25	0	24.87	33.80	4.95	0.10	20.0	25	24.87	33.80	22.50	536	0.154
50	0	18.90	34.54	4.34	0.38	10.0	50	18.90	34.54	24.71	325	0.262
75	0	16.66	34.56	3.73	-	-	75	16.66	34.56	25.28	270	0.337
100	0	15.47	34.56	3.76	0.76	11.5	100	15.47	34.56	25.55	245	0.402
117	0	13.72	34.48	3.73	-	-	150	12.56	34.45	26.06	196	0.514
197	5	10.91	34.39	3.28	1.40	25.0	200	10.86	34.39	26.35	169	0.607
297	3	9.26	34.12	2.99	-	-	300	9.22	34.30	26.56	149	0.772
406	3	7.80	34.25	2.69	1.98	47.5	400	7.89	34.25	26.73	133	0.919
482	13	7.17	34.25	2.60	-	-	500	6.99	34.25	26.85	121	1.053
685	13	5.19	34.27	1.90	2.34	72.5	600	6.02	34.27	26.99	108	1.175
875	13	3.77	34.39	1.60	2.63	83.0	800	4.34	34.34	27.25	83	1.383

a) Determined by taking bearing.

105

SHUMPU MARU; August 16, 1955; 2330-0138 GCT; 32°43'N, 133°56'E; 0712 02 278 0721 0721 1 34-7 3 x x 2 4 x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.1	34.12	4.43	0.09	8.0	0	28.1	34.12	21.73	609	0.000
10	5	28.05	34.16	4.46	-	-	10	28.05	34.16	21.77	605	0.061
25	5	28.03	34.19	4.50	0.17	5.0	25	28.03	34.19	21.81	602	0.151
50	5	25.47	34.41	4.56	0.23	3.0	50	25.47	34.41	22.78	509	0.291
75	0	21.67	34.61	4.05	-	-	75	21.67	34.61	24.04	388	0.403
100	0	20.43	34.61	4.01	0.57	14.5	100	20.43	34.61	24.37	357	0.497
138	0	15.92	34.65	3.77	-	-	150	15.43	34.61	25.60	240	0.649
167	40	14.73	34.56	3.77	1.18	15.0	200	13.63	34.50	25.89	212	0.764
236	40	12.42	34.43	3.56	-	-	300	10.30	34.34	26.40	164	0.959
309	40	10.00	34.32	3.12	1.52	30.0	400	8.33	34.30	26.69	136	1.116
325	45	9.73	34.30	3.15	-	-						
384	45	8.52	34.30	2.95	1.75	40.5						
458	45	7.62	34.27	2.69	1.88	49.5						

OBSERVATIONS OF THE NAGASAKI MARINE OBSERVATORY

SHUMPU MARU; July 28, 1955; 0227-0318 GCT; 31°50'N, 129°38'E; 1615 15 279 1622 2034 1 22-0 3 580-3 x 2 x x. A1

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.6	31.62	4.52	0.01	13.3		0	27.6	31.62	20.01	774	0.000
10	6	27.48	31.62	4.61	0.03	5.0		10	27.48	31.62	20.05	770	0.077
25	6	25.56	32.29	5.04	0.02	3.3		25	25.56	32.29	21.15	665	0.184
50	6	23.72	34.36	4.86	0.03	3.3		50	23.72	34.36	23.26	463	0.326
80	16	19.66	34.56	4.06	0.56	9.2		75	20.34	34.52	24.33	361	0.429
104	16	18.28	34.69	4.06	0.41	6.7		100	18.51	34.67	24.91	306	0.513
128	16	16.91	34.54	4.22	0.40	14.2		150	16.33	34.60	25.39	260	0.657
152	16	16.28	34.60	3.89	0.48	14.2		200	13.99	34.51	25.83	218	0.779
200	16	13.99	34.51	3.74	0.51	17.5		300	12.42	34.45	26.10	192	0.992
289	24	12.74	34.47	3.71	0.88	20.0		400	9.86	34.40	26.52	153	1.172
337	24	11.31	34.42	3.46	1.28	30.0		500	8.06	34.38	26.80	126	1.320
436	24	9.04	34.38	2.73	1.33	50.0							
535	24	7.52	34.38	2.57	1.98	55.0							

SHUMPU MARU; July 27-28, 1955; 2340-0050 GCT; 31°50'N, 129°12'E; 1617 03 273 1623 1836 1 22-0 3 790-3 x 2 x x. A2

0		26.6	31.91	5.08	0.01	16.7		0	26.6	31.91	20.54	723	0.000
10	0	26.56	31.92	5.10	0.01	3.3		10	26.56	31.92	20.57	721	0.072
25	0	26.34	31.96	5.18	0.01	3.3		25	26.34	31.96	20.66	712	0.179
50	0	23.63	34.27	4.71	0.01	3.3		50	23.63	34.27	23.23	466	0.327
78	15	21.59	34.56	4.13	0.22	10.8		75	21.81	34.54	23.95	397	0.435
102	15	20.14	34.63	3.82	0.38	10.8		100	20.26	34.63	24.44	350	0.530
137	15	18.89	34.60	3.80	0.40	14.2		150	17.17	34.54	25.14	284	0.690
151	15	17.10	34.54	4.07	0.68	16.7		200	14.68	34.47	25.66	234	0.822
217	22	13.84	34.45	3.69	0.81	28.0		300	11.09	34.43	26.34	170	1.026
263	22	11.89	34.47	3.25	0.88	22.5		400	8.53	34.36	26.71	135	1.185
310	22	10.87	34.43	3.10	1.13	50.0		500	7.43	34.36	26.87	119	1.319
408	22	8.32	34.36	2.52	1.65	50.0		600	6.44	34.36	27.01	106	1.440
520	18	7.24	34.36	2.33	1.28	60.0		700	5.95	34.38	27.09	98	1.551
615	18	6.29	34.36	2.11	1.28	63.3							
714	18	5.89	34.38	2.02	1.78	66.7							

SHUMPU MARU; July 27, 1955; 2000-2102 GCT; 31°50'N, 128°52'E; 1720 01 272 1624 1637 1 23-0 3 830-3 x 2 x x. A3

0		27.5	32.63	4.95	0.04	27.0		0	27.5	32.63	20.80	698	0.000
10	0	27.50	32.68	5.03	0.04	4.2		10	27.50	32.68	20.84	695	0.069
25	0	27.11	33.87	5.02	0.04	4.2		25	27.11	33.87	21.86	597	0.166
50	0	23.86	34.00	5.24	0.11	4.2		50	23.86	34.00	22.95	493	0.303
75	0	22.39	34.34	4.87	0.19	14.2		75	22.39	34.34	23.63	428	0.419
100	0	20.87	34.61	4.50	0.45	5.0		100	20.87	34.61	24.25	368	0.519
125	0	19.76	34.63	-	0.51	15.0		150	18.70	34.65	24.85	311	0.691
150	0	18.70	34.65	4.27	0.60	16.7		200	13.51	34.47	25.90	211	0.824
202	15	13.30	34.47	4.02	0.88	35.0		300	10.34	34.36	26.41	163	1.012
244	15	11.60	34.40	3.78	0.98	30.0		400	8.68	34.34	26.67	138	1.170
288	15	10.56	34.36	3.49	1.18	43.3		500	7.31	34.31	26.85	121	1.306
380	15	8.85	34.36	3.10	1.65	50.0		600	6.47	34.33	26.98	109	1.428
424	20	8.48	34.31	3.08	1.65	60.0							
522	20	6.97	34.31	2.85	1.65	55.0							
668	20	6.03	34.33	2.63	1.98	62.5							

SHUMPU MARU; July 27, 1955; 1713-1755 GCT; 31°51'N, 128°28'E; 1821 02 272 18xx 18xx 1 x x 250-3 x 2 x x. A4

0		27.8	32.54	4.70	0.19	9.2		0	27.8	32.54	20.63	715	0.000
10	0	27.83	32.54	4.72	0.23	5.0		10	27.83	32.54	20.62	716	0.071
25	0	27.39	33.15	4.72	0.23	3.3		25	27.39	33.15	21.23	657	0.174
50	0	25.48	34.43	4.98	0.16	2.5		50	25.48	34.43	22.79	508	0.320
77	10	21.17	34.60	4.42	0.98	10.0		75	21.49	34.58	24.06	387	0.433
101	10	20.02	34.58	4.22	0.45	5.8		100	20.07	34.58	24.44	350	0.525
126	10	18.04	34.51	4.07	0.81	12.5		150	15.90	34.52	25.43	256	0.679
151	10	15.81	34.52	3.99	0.81	21.3		200	13.94	34.45	25.79	222	0.801
200	10	13.94	34.45	4.01	0.81	30.0							

	OBSERVED								INTERPOLATED			COMPUTED		
	Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
A5	SHUMPU MARU; July 27, 1955; 1433-1511 GCT; 31°54'N, 128°05'E; 1821 02 273 18xx 18xx 1 x x 154-3 x 2 x x.													
	0		28.0	32.41	4.55	0.02	9.2		0	28.0	32.41	20.47	730	0.000
	10	8	28.08	32.47	4.60	1.10	3.3		10	28.08	32.47	20.49	728	0.072
	25	8	27.49	32.94	4.65	0.70	4.2		25	27.49	32.94	21.03	676	0.178
	50	8	23.91	34.60	4.72	0.38	4.2		50	23.91	34.60	23.39	450	0.319
	74	10	21.91	34.70	4.21	0.38	5.8		75	21.83	34.70	24.06	387	0.424
	98	10	19.92	34.58	4.11	0.70	6.7		100	19.80	34.58	24.51	344	0.516
	123	10	18.53	34.65	3.95	0.42	15.0							
	138	10	16.84	34.65	3.88	0.62	16.3							
A6	SHUMPU MARU; July 27, 1955; 1255-1320 GCT; 31°54'N, 127°48'E; 1819 01 274 xxxx xxxx 1 x x 140-3 x 2 x x.													
	0		27.5	32.45	4.66	0.02	15.0		0	27.5	32.45	20.66	712	0.000
	10	0	27.52	32.45	4.62	0.02	4.2		10	27.52	32.45	20.65	713	0.071
	25	0	26.70	32.59	4.77	0.02	4.2		25	26.70	32.59	21.03	676	0.175
	50	0	23.25	34.56	4.78	0.78	4.2		50	23.25	34.56	23.55	435	0.314
	76	15	21.06	34.78	4.07	0.73	15.0		75	21.15	34.78	24.31	363	0.415
	100	15	18.84	34.61	3.69	0.70	8.3		100	18.84	34.61	24.78	318	0.501
	125	15	16.09	34.61	3.74	0.81	15.0							
A7	SHUMPU MARU; July 27, 1955; 1015-1044 GCT; 31°52'N, 127°18'E; 1819 61 268 1822 1626 1 20-10 4 134-3 x 2 x x.													
	0		28.1	29.65	4.70	0.26	16.7		0	28.1	29.65	18.38	931	0.000
	10	0	27.44	31.26	4.66	0.28	5.8		10	27.44	31.26	19.79	895	0.091
	25	0	20.68	32.56	5.64	0.23	8.3		25	20.68	32.56	22.75	512	0.196
	50	0	18.28	34.16	4.17	0.51	11.7		50	18.28	34.16	24.58	337	0.303
	76	10	17.87	34.40	3.68	0.73	13.3		75	17.89	34.38	24.84	312	0.385
	100	10	15.56	34.49	3.55	0.90	21.3		100	15.56	34.49	25.48	251	0.456
	120	10	14.52	34.54	3.63	0.90	25.0							
A8	SHUMPU MARU; July 27, 1955; 0625-0648 GCT; 31°54'N, 126°44'E; 1613 03 288 1723 1845 1 17-0 4 110-3 x 2 x x.													
	0		28.3	29.11	4.48	0.30	16.3		0	28.3	29.11	17.91	977	0.000
	10	0	27.96	29.40	4.45	0.01	4.2		10	27.96	29.40	18.24	945	0.096
	25	0	16.10	31.51	6.73	0.29	6.7		25	16.10	31.51	23.07	481	0.203
	50	0	13.00	32.81	4.84	0.48	7.5		50	13.00	32.81	24.72	324	0.303
	75	0	14.67	33.86	3.83	0.04	17.5		75	14.67	33.86	25.19	279	0.379
	100	0	15.00	34.24	3.48	0.31	20.0		100	15.00	34.24	25.40	259	0.447
A9	SHUMPU MARU; July 27, 1955; 0240-0255 GCT; 31°54'N, 126°09'E; 1513 03 275 1521 1834 1 17-10 4 88-3 x 2 x x.													
	0		27.6	28.68	4.58	0.23	15.0	1.06	0	27.6	28.68	17.80	987	0.000
	11	10	26.55	29.09	4.70	0.23	7.5	1.06	10	26.64	29.05	18.39	930	0.095
	26	10	14.16	31.53	6.19	0.38	7.5	1.06	25	14.99	31.37	23.20	469	0.200
	50	10	12.59	32.29	4.89	0.46	9.2	1.06	50	12.59	32.29	24.40	354	0.304
	74	15	12.75	32.70	4.77	0.98	11.7	2.00	75	12.76	32.72	24.70	326	0.389
A10	SHUMPU MARU; July 26, 1955; 2300-2313 GCT; 31°54'N, 125°35'E; 1405 03 264 1421 1633 1 17-0 5 63-3 x 2 x x.													
	0		26.5	28.78	4.61	0.23	11.7		0	26.5	28.78	18.23	946	0.000
	10	0	23.28	29.45	5.08	0.18	8.3		10	23.28	29.45	19.68	806	0.087
	25	0	14.79	31.42	5.47	0.22	8.3		25	14.79	31.42	23.28	461	0.182
	50	0	13.28	31.76	6.25	0.42	8.3		50	13.28	31.76	23.86	406	0.291
A11	SHUMPU MARU; July 26, 1955; 1950-2004 GCT; 31°55'N, 125°00'E; 1602 02 258 14xx 1423 1 x x 47-3 x 2 x x.													
	0		25.6	30.07	4.67	0.01	8.3		0	25.6	30.07	19.47	826	0.000
	10	0	23.08	31.28	5.13	0.23	6.7		10	23.08	31.28	21.12	668	0.074
	25	0	18.49	32.18	4.60	0.24	7.5		25	18.49	32.18	23.01	487	0.161
	40	0	18.36	32.12	4.69	0.28	8.3							

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SHUMPU MARU; July 26, 1955; 1645-1700 GCT; 31°27'N, 125°00'E; 1101 02 260 xxxx xxxx 1 x x 44-3 x x x x. B12

0		26.2	30.88	4.73	0.31	11.7	0	26.2	30.88	19.89	783	0.000
10	0	21.50	32.14	5.33	0.34	6.7	10	21.50	32.14	22.21	563	0.067
25	0	17.62	32.14	4.84	0.65	6.7	25	17.62	32.14	23.20	469	0.144
35	0	17.52	32.18	4.86	0.31	5.8						

SHUMPU MARU; July 25, 1955; 0120-0215 GCT; 31°00'N, 130°10'E; 2205 02 276 2121 2231 4 28-10 3 380-3 x 2 x x. C2

0		27.8	31.76	4.45	0.48	15.0	0	27.8	31.76	20.07	769	0.000
10	0	27.51	32.92	4.51	0.06	3.3	10	27.51	32.92	21.01	678	0.072
25	0	26.78	34.00	4.58	0.04	3.3	25	26.78	34.00	22.06	578	0.166
50	0	24.94	34.33	4.61	0.19	4.2	50	24.94	34.33	22.87	500	0.301
76	10	22.52	34.67	4.04	0.19	12.5	75	22.61	34.65	23.80	411	0.416
100	10	21.38	34.67	4.00	0.37	8.3	100	21.38	34.67	24.16	377	0.515
125	10	19.40	34.72	3.88	1.23r	13.3	150	17.99	34.65	25.03	294	0.685
150	10	17.99	34.65	3.77	0.76	13.3	200	13.96	34.49	25.82	219	0.816
185	12	14.62	34.52	3.65	0.98	25.0	300	11.20	34.36	26.26	177	1.018
231	12	12.59	34.43	3.52	1.08	18.3						
279	12	11.98	34.38	3.38	1.06	32.5						
328	12	10.17	34.33	3.06	1.18	42.5						

SHUMPU MARU; July 25, 1955; 0420-0503 GCT; 31°00'N, 129°45'E; 1607 03 281 1420 2042 4 26-0 3 530-3 x 2 x x. C3

0		28.5	32.74	4.44	0.11	15.0	0	28.5	32.74	20.55	722	0.000
10	0	27.84	32.94	4.51	0.03	3.3	10	27.84	32.94	20.92	687	0.072
25	0	27.18	33.50	4.56	0.21	3.3	25	27.18	33.50	21.55	626	0.170
50	0	24.99	34.65	4.70	0.01	3.3	50	24.99	34.65	23.10	478	0.309
77	10	21.44	34.74	4.11	0.20	12.5	75	21.70	34.74	24.13	380	0.417
102	10	19.74	34.69	3.89	0.40	8.3	100	19.88	34.69	24.56	339	0.507
125	10	19.30	34.65	3.93	0.40	15.0	150	18.25	34.49	24.84	312	0.672
148	10	18.39	34.49	3.77	0.48	12.5	200	14.88	34.34	25.52	248	0.814
197	10	15.06	34.34	3.72	0.76	18.8	300	10.58	34.29	26.33	171	1.022
255	28	11.66	34.31	3.36	1.11	25.0	400	8.73	34.25	26.60	145	1.105
297	28	10.63	34.29	3.17	1.23	17.5						
386	28	9.05	34.25	2.90	1.23	21.3						
431	28	8.03	34.24	2.65	0.90	28.3						

SHUMPU MARU; July 25, 1955; 0710-0811 GCT; 31°00'N, 129°24'E; 2011 02 289 2221 2254 4 33-0 3 740-3 x 2 x x. C4

0		29.1	33.06	4.49	0.23	12.5	0	29.1	33.06	20.60	718	0.000
10	6	28.20	32.99	4.50	0.03	3.3	10	28.20	32.99	20.84	695	0.070
25	6	27.04	33.77	4.71	0.03	3.3	25	27.04	33.77	21.80	603	0.168
50	6	23.51	34.40	4.70	0.19	3.3	50	23.51	34.40	23.35	454	0.300
77	18	22.15	34.60	4.19	0.73	10.8	75	22.25	34.58	23.85	407	0.408
101	18	18.73	34.74	3.69	0.48	10.0	100	18.87	34.74	24.86	310	0.499
125	18	17.69	34.72	3.63	0.48	20.0	150	15.33	34.69	25.67	233	0.636
135	28	15.73	34.72	3.68	0.58	18.8	200	13.75	34.58	25.94	208	0.749
184	28	14.44	34.61	3.64	0.58	20.0	300	10.89	34.47	26.40	164	0.936
217	28	13.02	34.54	3.55	1.18	18.8	400	9.46	34.43	26.62	143	1.097
252	28	11.58	34.49	3.21	0.71	65.0	500	7.99	34.40	26.83	123	1.237
437	36	8.93	34.42	2.76	1.34	50.0	600	6.84	34.42	27.00	107	1.361
526	36	7.60	34.38	2.49	1.48	60.0						
613	36	6.71	34.42	2.31	1.48	65.0						
656	36	6.73	34.36	2.23	1.18	60.0						

NMO

NORPAC

C5 SHUMPU MARU; July 25, 1955; 1030-1114 GCT; 31°00'N, 129°00'E; 2208 01 273 2221 2244 1 x x 380-3 x 2 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁎°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.5	33.33	4.50	0.23	6.7		0	27.5	33.33	21.33	648	0.000
10	0	26.97	33.51	4.53	0.15	2.5		10	26.97	33.51	21.63	619	0.063
25	0	25.31	34.11	4.74	0.31	2.5		25	25.31	34.11	22.60	526	0.149
50	0	23.16	34.52	4.31	0.18	3.3		50	23.16	34.52	23.55	435	0.269
76	10	21.16	34.67	3.98	0.31	6.7		75	21.93	34.67	24.01	391	0.373
100	10	19.90	34.72	3.77	0.23	6.7		100	19.90	34.72	24.59	336	0.465
125	10	17.95	34.65	3.55	0.40	16.7		150	16.49	34.63	25.37	262	0.616
150	10	16.49	34.63	3.56	0.40	15.0		200	13.54	34.51	25.82	219	0.739
205	16	13.24	34.49	3.50	0.51	16.3		300	9.48	34.43	26.54	151	0.930
244	16	12.45	34.45	3.42	0.48	20.0							
285	16	9.68	34.36	2.86	0.48	45.0							
328	16	9.12	34.33	2.73	0.65	50.0							

C6 SHUMPU MARU; July 25, 1955; 1315-1413 GCT; 31°00'N, 128°37'E; 1812 02 276 xxxx xxxx 1 x x 740-3 x 2 x x.

0		28.1	32.05	4.85	0.31	19.0		0	28.1	32.05	20.17	759	0.000
10	0	27.28	32.16	4.72	0.58	3.3		10	27.28	32.16	20.52	725	0.074
25	0	26.98	32.59	4.83	0.31	3.3		25	26.98	32.59	20.94	685	0.180
50	0	22.82	34.07	5.04	0.23	4.2		50	22.82	34.07	23.30	459	0.323
75	0	20.85	34.25	4.76	0.50	10.8		75	20.85	34.25	23.99	393	0.430
100	0	18.79	34.43	4.39	0.38	5.8		100	18.79	34.43	24.66	348	0.523
125	0	16.82	34.58	4.21	0.44	23.0		150	15.05	34.56	25.65	235	0.671
150	0	15.05	34.56	4.02	0.58	21.3		200	13.37	34.49	25.94	208	0.784
200	0	13.37	34.49	3.83	0.68	26.6		300	10.52	34.38	26.40	164	0.975
250	0	11.84	34.43	3.42	0.91	20.0		400	8.50	34.31	26.67	138	1.133
300	0	10.52	34.38	3.14	0.98	40.0		500	7.23	34.31	26.86	120	1.269
400	0	8.50	34.31	2.85	1.18	55.0		600	6.29	34.34	27.02	105	1.389
500	0	7.23	34.31	2.51	1.18	60.0							
650	0	5.82	34.36	2.13	1.98	70.0							

C7 SHUMPU MARU; July 25, 1955; 1600-1645 GCT; 31°00'N, 128°14'E; 1611 02 275 xxxx xxxx 1 x x 580-3 x 2 x x.

0		28.1	33.21	4.70	1.48r	11.7		0	28.1	33.21	21.03	676	0.000
10	0	28.03	33.17	4.68	0.48	2.5		10	28.03	33.17	21.03	676	0.067
25	0	27.07	33.60	4.72	0.61	2.5		25	27.07	33.60	21.67	615	0.164
50	0	23.57	34.42	4.80	0.61	2.5		50	23.57	34.42	23.35	454	0.298
75	0	22.02	34.76	4.12	0.38	9.2		75	22.02	34.76	24.05	388	0.404
100	0	20.60	34.79	4.02	0.38	8.3		100	20.60	34.79	24.46	348	0.497
125	0	19.01	34.78	3.94	0.48	15.0		150	16.88	34.65	25.29	269	0.653
150	0	16.88	34.65	3.75	0.40	17.5		200	12.66	34.42	26.03	199	0.773
200	0	12.66	34.42	3.58	0.40	28.8		300	9.68	34.33	26.50	154	0.953
250	0	10.98	34.38	3.27	0.48	21.3		400	8.32	34.34	26.69	136	1.105
300	0	9.68	34.33	3.01	0.71	35.0		500	7.41	34.38	26.89	117	1.238
400	0	8.32	34.34	2.56	0.65	60.0							
500	0	7.41	34.38	2.39	1.06	60.0							

C8 SHUMPU MARU; July 25, 1955; 1846-1918 GCT; 31°00'N, 127°51'E; 2108 02 273 xxxx xxxx 1 x x 200-3 x 2 x x.

0		27.8	31.94	-	0.19	5.8		0	27.8	31.94	20.19	757	0.000
10	4	27.82	32.38	4.68	0.19	2.5		10	27.82	32.38	20.50	727	0.074
25	4	25.76	33.69	4.75	0.26	2.5		25	25.76	33.69	22.15	569	0.171
50	4	24.34	34.38	4.83	0.20	2.5		50	24.34	34.38	23.10	478	0.302
75	4	21.36	34.52	4.17	0.26	14.2		75	21.36	34.52	24.05	388	0.411
100	5	19.59	34.56	4.21	0.31	5.0		100	19.59	34.56	24.55	340	0.503
125	5	16.73	34.56	4.60	0.43	16.7		150	14.22	34.47	25.75	226	0.574
149	5	14.25	34.47	3.80	0.48	20.0							
179	5	13.23	34.43	3.59	0.68	25.0							

OBSERVED								INTERPOLATED			COMPUTED			
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
SHUMPU MARU; July 25, 1955; 2309-2336 GCT; 3100'N, 127°17'E; 1605 01 274 1820 1844 1 24-0 4 120-3 x 2 x x.														C9
0		27.4	31.58	4.62	0.23	5.8		0	27.4	31.58	20.05	770	0.000	
10	0	27.19	32.81	4.59	0.11	-		10	27.19	32.81	21.03	676	0.072	
25	0	24.25	33.12	4.99	0.11	3.3		25	24.25	33.12	22.16	568	0.165	
50	0	21.88	34.47	4.52	0.15	4.2		50	21.88	34.47	23.87	405	0.287	
75	0	18.68	34.60	3.72	0.23	12.5		75	18.68	34.60	24.81	315	0.378	
100	0	15.17	34.56	3.54	0.40	15.0		100	15.17	34.56	25.62	238	0.447	
110	0	15.06	34.56	3.54	0.50	17.5								
SHUMPU MARU; July 26, 1955; 0310-0335 GCT; 31°00'N, 126°43'E; 1910 02 275 1921 1835 1 21-10 4 96-3 x 2 x x.														C10
0		28.3	29.40	4.29	0.18	15.0		0	28.3	29.40	18.11	957	0.000	
10	0	27.81	29.42	4.41	0.48	10.0		10	27.81	29.42	18.30	939	0.094	
25	0	14.60	32.52	5.86	0.38	8.3		25	14.60	32.52	24.16	377	0.193	
50	0	14.32	33.28	4.46	0.41	10.0		50	14.32	33.28	24.81	315	0.280	
75	0	14.34	33.31	4.39	0.40	17.5		75	14.34	33.41	24.84	312	0.359	
90	0	14.35	33.31	4.41	0.36	10.8								
SHUMPU MARU; July 26, 1955; 0650-0709 GCT; 31°00'N, 126°09'E; 2011 01 277 2021 2035 1 18-0 5 76-3 x 2 x x.														C11
0		27.4	29.22	4.31	0.23	11.7		0	27.4	29.22	18.28	844	0.000	
10	0	24.17	29.99	4.94	0.23	9.2		10	24.17	29.99	19.84	791	0.081	
25	0	13.85	32.12	5.16	0.18	10.0		25	13.85	32.12	24.01	391	0.170	
50	0	13.71	32.36	4.79	0.33	10.0		50	13.71	32.36	24.23	370	0.265	
65	0	14.00	32.66	4.85	0.40	13.3								
SHUMPU MARU; July 26, 1955; 1022-1041 GCT; 31°00'N, 125°35'E; 1407 02 267 14x0 2034 1 17-0 5 65-3 x 2 x x.														C12
0		25.8	30.99	4.71	0.40	8.3		0	25.8	30.99	20.10	766	0.000	
11	10	24.67	33.19	4.89	0.18	4.2		10	24.81	32.99	21.90	593	0.067	
26	10	22.52	33.06	4.92	0.16	5.8		25	22.65	33.06	22.58	528	0.152	
50	10	20.00	33.33	3.98	0.58	8.3		50	20.00	33.33	23.51	439	0.273	
60	10	20.25	33.22	4.04	0.58	10.8								
SHUMPU MARU; July 26, 1955; 1345-1358 GCT; 31°00'N, 125°00'E; 1611 02 268 xxxx xxxx 1 x x 52-3 x 2 x x.														C13
0		27.2	33.69	4.50	0.65	8.3		0	27.2	33.69	21.70	612	0.000	
10	0	26.78	33.73	4.48	0.54	3.3		10	26.78	33.73	21.85	598	0.060	
25	0	24.60	33.71	4.57	0.48	3.3		25	24.60	33.71	22.51	535	0.145	
45	0	23.10	33.66	4.15	0.17	8.3								
SHUMPU MARU; July 9, 1955; 0230-0355 GCT; 31°00'N, 130°33'E; 2924 30 242 3122 2523 4 18-10 3 230-3 x 2 x x.														D1
0		26.1	31.67	4.56	0.40	20.8		0	26.1	31.67	20.53	724	0.000	
14	24	26.13	32.45	4.78	0.33	5.8		10	26.12	32.29	20.98	681	0.070	
27	24	23.28	33.78	4.83	0.40	5.8		25	23.72	33.59	22.68	518	0.160	
54	24	23.28	34.56	4.22	0.31	5.8		50	23.28	34.45	23.46	444	0.280	
75	30	18.66	34.63	3.81	0.40	10.0		75	18.66	34.63	24.84	312	0.376	
100	30	18.20	34.61	4.71	0.40	13.3		100	18.20	34.61	24.95	302	0.453	
131	40	16.81	34.58	3.94	0.36	18.3		150	16.15	34.60	25.43	256	0.595	
154	40	16.01	34.60	4.01	0.40	15.0		200	(14.61)	(34.56)	(25.74)	(227)	(0.718)	
199	40	14.61	34.56	3.62	0.42	17.5								

NMO

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

D2

SHUMPU MARU; July 9, 1955; 0500–0543 GCT; 30°50'N, 130°33'E; 3213 80 249 3321 3223 4 23–0 3 240–3 x 2 x x.

0		26.6	32.59	4.35	0.23	18.3	0	26.6	32.59	21.06	673	0.000
10	5	25.03	33.95	4.57	0.06	4.2	10	25.03	33.95	22.57	529	0.060
25	5	24.55	34.00	4.45	0.19	4.2	25	24.55	34.00	22.75	512	0.138
50	5	22.38	34.34	4.52	0.17	4.2	50	22.38	34.34	23.63	428	0.256
75	8	20.39	34.60	3.98	0.20	6.7	75	20.39	34.60	24.37	357	0.354
100	8	19.24	34.63	3.88	0.48	7.5	100	19.24	34.63	24.69	327	0.441
128	15	18.10	34.60	3.62	0.30	10.0	150	16.66	34.61	25.32	267	0.591
150	15	16.66	34.61	3.80	0.48	10.8	200	14.52	34.54	25.75	226	0.717
195	15	14.74	34.54	3.63	0.48	14.2						
213	15	13.96	34.54	3.63	0.50	19.2						

D3

SHUMPU MARU; July 9, 1955; 0650–0720 GCT; 30°40'N, 130°33'E; 3103 01 259 3121 3121 4 27–10 2 200–3 x 3 x x.

0		26.9	32.00	4.43	0.36	20.8	0	26.9	32.00	20.52	725	0.000
10		26.97	32.14	4.57	0.33	5.0	10	26.97	32.14	20.61	717	0.072
25		26.38	33.21	4.55	0.36	5.0	25	26.38	33.21	21.59	623	0.172
50		23.60	34.13	4.71	0.34	5.0	50	23.60	34.13	23.13	475	0.310
76	16	23.22	34.60	4.26	0.23	5.8	75	23.23	34.58	23.56	434	0.424
100	16	20.88	34.74	3.91	0.23	6.7	100	20.88	34.74	24.35	359	0.524
125	20	20.44	34.74	3.86	0.23	6.7	150	19.52	34.70	24.68	327	0.697
150	20	19.52	34.70	3.79	0.17	9.2						
180	20	15.59	34.58	3.59	0.32	13.3						

D4

SHUMPU MARU; July 9, 1955; 0820–0847 GCT; 30°30'N, 130°33'E; 0406 02 261 0321 3422 4 22–0 2 160–3 x 2 x x.

0		27.3	32.09	4.48	0.03	18.3	0	27.3	32.09	20.46	731	0.000
10		27.23	32.66	4.44	0.15	6.7	10	27.23	32.66	20.91	688	0.079
25		26.30	33.33	4.61	0.18	6.7	25	26.30	33.33	21.71	611	0.176
50		23.16	34.22	4.61	0.18	5.8	50	23.16	34.22	23.32	457	0.310
75		22.04	34.22	4.59	0.23	6.7	75	22.04	34.22	23.63	428	0.421
100		20.91	34.45	4.15	0.23	6.7	100	20.91	34.45	24.13	380	0.523
125		19.97	34.52	4.06	0.16	7.5	150	18.36	34.69	24.96	301	0.696
150		18.36	34.69	3.73	0.23	8.3						

E1

SHUMPU MARU; July 10, 1955; 0110–0143 GCT; 30°12'N, 130°34'E; 1103 02 287 09xx 1823 4 27–0 3 180–3 x 2 x x.

0		28.1	32.83	4.45	0.03	18.8	0	28.1	32.83	20.75	703	0.000
10		26.67	33.21	4.50	0.03	4.2	10	26.67	33.21	21.49	632	0.066
25		25.17	34.31	4.30	0.03	3.3	25	25.17	34.31	22.79	508	0.153
50		23.58	34.76	4.48	0.04	4.2	50	23.58	34.76	23.60	430	0.271
76	10	21.38	34.74	-	0.08	5.8	75	21.46	34.74	24.19	374	0.372
100	10	21.03	34.74	-	0.23	6.7	100	21.03	34.74	24.31	363	0.465
126	15	20.55	34.74	3.94	0.23	7.5	150	20.31	34.70	24.47	348	0.645
150	15	20.31	34.70	3.93	0.08	8.3						
169	15	20.04	34.69	3.92	0.28	8.3						

E2

SHUMPU MARU; July 10, 1955; 0343–0445 GCT; 29°57'N, 130°50'E; 1408 02 283 1421 2023 4 23–0 2 730–3 x x x x.

0		27.6	33.37	4.51	0.06	23.3	0	27.6	33.37	21.33	648	0.000
11	10	27.21	33.78	4.63	0.04	5.0	10	27.25	33.75	21.72	610	0.062
25	10	26.30	34.13	4.70	0.04	6.7	25	26.30	34.13	22.30	555	0.150
50	10	24.75	34.54	4.46	0.28	6.7	50	24.75	34.54	23.10	478	0.279
75	8	23.08	34.74	4.32	0.28	16.7	75	23.08	34.74	23.73	416	0.392
100	8	20.65	34.69	3.98	0.28	9.2	100	20.65	34.69	24.36	358	0.489
126	12	19.81	34.63	3.96	0.28	10.8	150	18.84	34.63	24.79	317	0.660
151	12	18.78	34.63	3.78	0.28	10.8	200	16.49	34.60	25.35	264	0.808
200	12	16.49	34.60	3.63	0.42	15.0	300	9.24	34.34	26.59	146	1.024
249	20	13.94	34.51	3.50	0.46	16.7	400	7.49	34.31	26.83	123	1.163
286	20	9.51	34.34	2.95	0.58	33.3	500	6.71	34.29	26.92	115	1.289
385	20	7.59	34.31	2.50	0.88	41.7	600	5.52	34.27	27.06	101	1.404
492	25	6.81	34.29	2.33	0.88	50.0						
592	25	5.54	34.27	1.93	1.18	50.0						
640	25	5.40	34.27	1.87	1.48	62.5						

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	⊀°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δT	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SHUMPU MARU; July 10, 1955; 0655-0812 GCT; 29°42'N, 131°06'E; 1311 03 283 1321 1132 1 29-10 2 1000-1 x 2 x x. E3

Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	⊀°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L
0		28.5	33.69	4.46	0.06	25.0	
11	12	27.79	34.00	4.50	0.06	6.7	
25	12	27.47	34.31	4.55	0.06	5.0	
50	12	26.85	34.60	4.52	0.06	6.7	
75	12	25.47	34.69	4.41	0.06	18.3	
107	19	23.60	34.74	4.19	0.06	6.7	
131	19	22.48	34.76	4.06	0.06	8.3	
154	19	21.18	34.72	4.28	0.19	8.3	
201	19	18.79	34.72	3.86	0.38	10.8	
250	30	17.08	34.67	3.77	0.48	10.8	
290	30	14.90	34.56	3.66	0.48	25.0	
376	30	11.40	34.43	3.28	0.86	30.0	
468	30	7.94	34.31	2.59	1.10	43.3	
676	45	4.55	34.31	1.59	1.98	68.2	
854	45	3.65	34.42	1.52	1.48	83.3	
1035	45	3.10	34.47	1.82	1.48	100.0	

Z	T	S	σ_t	δT	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	28.5	33.69	21.27	653	0.000
10	27.85	33.96	21.69	613	0.063
25	27.47	34.31	22.07	577	0.152
50	26.85	34.60	22.49	537	0.292
75	25.47	34.69	22.98	490	0.421
100	24.01	34.72	23.45	445	0.539
150	21.42	34.72	24.19	374	0.746
200	18.84	34.72	24.87	309	0.920
300	14.49	34.54	25.75	226	1.197
400	10.90	34.40	26.35	169	1.403
500	7.42	34.31	26.84	122	1.556
600	5.79	34.31	27.06	101	1.674
700	4.43	34.33	27.22	86	1.774
800	3.92	34.38	27.34	75	1.861
1000	3.21	34.47	27.44	65	2.014

SHUMPU MARU; July 10, 1955; 1015-1136 GCT; 29°28'N, 131°23'E; 1314 02 284 1221 1422 1 x x 1000-1 x x x x. E4

Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	⊀°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L
0		28.6	34.13	4.52	0.48	18.8	
11	22	28.59	34.11	4.46	0.06	3.3	
25	22	28.04	34.09	4.50	0.06	3.3	
48	22	27.45	34.16	4.60	0.06	4.2	
71	22	27.09	34.49	4.53	0.06	32.5	
111	28	24.32	34.69	4.40	0.06	4.2	
133	28	23.28	34.74	4.22	0.06	5.0	
155	28	22.04	34.81	4.25	0.17	5.0	
201	28	20.99	34.85	4.15	0.17	5.8	
275	30	17.07	34.74	4.15	0.17	6.7	
322	30	15.25	34.63	3.88	0.31	9.2	
400	30	12.55	34.51	3.51	0.31	16.8	
499	30	8.50	34.34	2.91	0.64	40.0	
578	25	6.37	34.27	2.25	0.64	50.0	
733	25	4.29	34.36	1.61	1.38	80.0	
907	25	3.51	34.43	1.76	1.48	80.0	

Z	T	S	σ_t	δT	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	28.6	34.13	21.56	626	0.000
10	28.59	34.11	21.55	626	0.062
25	28.06	34.09	21.72	610	0.155
50	27.42	34.20	22.01	582	0.304
75	26.81	34.51	22.43	542	0.445
100	25.08	34.63	23.06	482	0.574
150	22.32	34.79	23.99	393	0.796
200	21.01	34.85	24.40	354	0.986
300	16.10	34.69	25.51	249	1.292
400	12.55	34.51	26.13	190	1.520
500	8.47	34.34	26.70	135	1.691
600	6.07	34.29	27.00	107	1.820
700	4.73	34.34	27.20	88	1.924
800	3.99	34.38	27.32	77	2.014

SHUMPU MARU; July 10, 1955; 1402-1522 GCT; 29°15'N, 131°37'E; 1116 25 284 1121 1423 1 x x 1000-1 x 2 x x. E5

Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	⊀°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L
0		28.7	34.42	4.52	0.06	15.0	
11	8	28.75	34.38	4.49	0.06	3.3	
26	8	28.47	34.40	4.52	0.06	3.3	
51	8	26.41	34.60	4.68	0.06	3.3	
75	8	25.30	34.67	4.74	0.08	23.8	
102	9	24.27	34.70	4.63	0.13	4.2	
126	9	22.91	34.79	4.49	0.15	5.8	
151	9	22.00	34.81	4.39	0.15	5.0	
201	9	19.42	34.79	4.25	0.23	5.8	
255	16	17.34	34.70	4.20	0.23	5.8	
304	16	16.44	34.69	4.08	0.23	5.8	
397	16	14.29	34.42	3.81	0.23	15.0	
487	16	11.60	34.36	3.61	0.31	20.0	
660	25	6.71	34.16	2.55	0.98	47.5	
852	25	4.64	34.36	1.65	0.98	95.0	
1051	25	3.43	34.45	1.81	1.18	75.0	

Z	T	S	σ_t	δT	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	28.7	34.42	21.75	607	0.000
10	28.75	34.38	21.71	611	0.060
25	28.49	34.40	21.81	602	0.151
50	26.49	34.60	22.60	526	0.293
75	25.30	34.67	23.02	486	0.420
100	24.35	34.70	23.34	455	0.539
150	22.04	34.81	24.09	384	0.751
200	19.47	34.79	24.76	320	0.930
300	16.51	34.69	25.42	257	1.223
400	14.20	34.42	25.72	229	1.476
500	11.23	34.34	26.25	178	1.690
600	8.41	34.24	26.63	142	1.860
700	6.28	34.20	26.91	116	1.999
800	5.20	34.31	27.13	95	2.114
1000	3.74	34.43	27.38	71	2.296

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OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	x°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

E6 SHUMPU MARU; July 10, 1955; 1750-1922 GCT; 29°00'N, 131°53'E; 1517 01 278 xxxx xxxx 1 x x 1000-1 x x x x.

0		28.5	34.51	4.57	0.04	18.3		0	28.5	34.51	21.89	594	0.000
11	10	28.51	34.47	4.27	0.04	6.7		10	28.51	34.47	21.86	597	0.059
26	10	27.56	34.43	4.62	0.08	5.0		25	27.64	34.43	22.11	573	0.147
50	10	24.32	34.61	4.92	0.08	5.0		50	24.32	34.61	23.27	462	0.277
75	10	22.79	34.74	5.01	0.08	15.8		75	22.79	34.74	23.82	409	0.386
111	26	21.59	34.78	4.39	0.11	5.8		100	21.96	34.76	24.07	390	0.487
133	26	21.07	34.87	4.65	0.11	6.7		150	20.56	34.83	24.50	345	0.673
155	26	20.41	34.83	4.67	0.11	6.7		200	19.03	34.78	24.86	310	0.840
200	26	19.03	34.78	4.20	0.11	8.3		300	16.52	34.69	25.41	258	1.131
334	40	15.66	34.65	4.07	0.48	10.0		400	14.18	34.54	25.83	218	1.379
372	40	14.67	34.60	4.25	0.48	16.7		500	11.38	34.34	26.22	181	1.589
458	40	13.17	34.42	4.00	0.58	21.7		600	8.41	34.25	26.64	141	1.760
552	40	9.16	34.25	3.45	0.98	31.7		700	6.84	34.25	26.88	118	1.900
797	45	5.32	34.25	1.88	1.98	62.5		800	5.30	34.25	27.07	100	2.018
987	45	4.13	34.43	1.76	1.48	83.3		1000	4.07	34.43	27.35	74	2.210
1177	45	3.24	34.51	1.89	0.81	93.8							

E7 SHUMPU MARU; July 10, 1955; 2000-2327 GCT; 28°47'N, 132°08'E; 1116 02 284 1122 1424 1 25-10 1-2 1000-1 x 2 x x.

0		28.0	34.27	4.44	0.08	20.0		0	28.0	34.27	21.87	596	0.000
11	10	27.79	34.27	4.69	0.08	5.0		10	27.81	34.27	21.92	592	0.059
26	10	24.56	34.47	4.96	0.08	4.2		25	24.78	34.45	23.01	487	0.140
50	10	21.86	34.79	5.18	0.08	5.0		50	21.86	34.79	24.13	381	0.249
75	10	20.64	34.72	5.16	0.11	20.0		75	20.64	34.72	24.41	354	0.342
102	12	19.62	34.81	4.78	0.11	5.8		100	19.69	34.81	24.71	325	0.427
126	12	19.10	34.79	4.64	-	6.7		150	18.92	34.79	24.90	307	0.587
151	12	18.89	34.79	4.53	0.15	6.7		200	17.78	34.74	25.15	283	0.737
200	12	17.78	34.74	4.42	0.18	8.3		300	15.50	34.63	25.60	240	1.005
268	17	16.18	34.70	4.34	0.18	8.3		400	13.07	34.45	25.98	204	1.237
311	17	15.26	34.61	4.14	0.28	15.0		500	10.57	34.34	26.36	168	1.433
402	17	13.02	34.45	3.89	0.38	21.7		600	8.74	34.31	26.63	142	1.599
497	17	10.63	34.34	3.57	0.70	33.3		700	6.90	34.29	26.90	117	1.740
750	36	5.96	34.27	2.22	0.48	55.6		800	5.52	34.29	27.07	100	1.859
950	36	4.14	34.36	1.57	1.48	78.9		1000	3.94	34.38	27.32	77	2.054
1145	36	3.32	34.43	1.65	1.48	93.8							

E8 SHUMPU MARU; July 11, 1955; 0200-0328 GCT; 28°33'N, 132°25'E; 1118 25 286 0922 1126 1 27-10 2 1000-1 x x x x.

0		27.9	34.29	4.39	0.03	17.5		0	27.9	34.29	21.92	591	0.000
12	16	27.95	34.33	4.39	0.03	3.3		10	27.94	34.33	21.93	590	0.059
27	16	23.96	34.49	4.90	0.03	3.3		25	24.49	34.47	23.12	476	0.139
51	16	21.44	34.79	5.06	0.03	3.3		50	21.54	34.78	24.20	373	0.245
75	16	20.01	34.83	5.07	0.03	17.5		75	20.01	34.83	24.65	330	0.334
100	16	19.37	34.85	4.60	0.03	3.3		100	19.37	34.85	24.83	313	0.415
142	20	18.66	34.81	4.42	0.03	5.0		150	18.60	34.81	24.99	298	0.569
165	20	18.47	34.81	4.31	0.03	4.2		200	17.73	34.78	25.19	279	0.716
212	20	17.47	34.76	4.23	0.03	5.0		300	15.40	34.63	25.63	237	0.981
260	16	16.20	34.69	4.19	0.06	5.0		400	12.94	34.45	26.00	202	1.210
309	16	15.21	34.61	4.11	0.15	9.2		500	9.86	34.31	26.45	159	1.401
391	16	13.22	34.47	3.70	0.40	21.3		600	7.84	34.25	26.73	133	1.557
494	16	9.98	34.31	3.36	0.65	30.0		700	6.21	34.25	26.96	111	1.688
660	25	6.61	34.24	2.47	1.18	50.0		800	5.15	34.29	27.12	96	1.801
860	25	4.51	34.33	1.63	0.98	95.0		1000	3.82	34.42	27.37	72	1.983
1058	25	3.53	34.45	1.60	1.48	75.0							

OBSERVED							
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.
m	*°	°C	‰	ml/L	µg at/L	µg at/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

SHUMPU MARU; July 11, 1955; 0530-0640 GCT; 28°18'N, 132°40'E; 1012 02 280 0922 1034 1 46-10 1-2 1000-1 x 2 x x. E9

Z	W	T	S	O_2	PO_4-P	Si	Z	T	S	σ_t	δ_T	ΔD
0		28.3	34.27	4.32	0.03	20.0	0	28.3	34.29	21.78	604	0.000
10		28.16	34.29	4.43	0.03	5.0	10	28.16	34.29	21.83	600	0.060
25		24.34	34.43	4.82	0.03	5.0	25	24.34	34.43	23.13	475	0.140
50		22.16	34.76	5.01	0.03	5.0	50	22.16	34.76	24.01	391	0.249
75		20.78	34.85	4.97	0.03	15.0	75	20.78	34.85	24.46	348	0.342
101	8	20.14	34.85	4.86	0.11	6.7	100	20.16	34.85	24.53	342	0.429
126	8	19.42	34.74	4.60	-	4.2	150	18.61	34.85	25.02	295	0.590
151	8	18.58	34.85	4.28	0.15	4.2	200	17.23	34.78	25.31	268	0.734
200	8	17.23	34.78	4.15	0.23	8.3	300	14.74	34.58	25.73	228	0.990
255	10	16.06	34.67	4.07	0.23	10.0	400	11.73	34.42	26.21	182	1.204
302	10	14.68	34.58	3.99	0.23	15.0	500	8.93	34.25	26.57	148	1.378
393	10	11.87	34.42	3.58	0.18	21.7	600	7.19	34.25	26.83	123	1.523
489	10	9.12	34.25	3.28	0.40	26.7	700	5.91	34.25	27.00	107	1.647
620	15	6.84	34.25	2.68	0.48	41.7	800	4.75	34.25	27.13	95	1.757
816	15	4.56	34.25	1.59	1.18	65.2	1000	3.68	34.42	27.38	71	1.938
1010	15	3.63	34.42	1.65	1.48	65.2						

SHUMPU MARU; July 11, 1955; 0910-1023 GCT; 28°08'N, 132°56'E; 1414 02 281 1222 1334 1 31-10 1-2 1000-1 x x x x. E10

Z	W	T	S	O_2	PO_4-P	Si	Z	T	S	σ_t	δ_T	ΔD
0		28.3	34.43	4.34	0.21	13.8	0	28.3	34.43	21.90	593	0.000
10	4	28.28	34.45	4.39	0.11	3.3	10	28.28	34.45	21.92	591	0.059
25	4	25.29	34.52	5.20	0.11	3.3	25	25.29	34.52	22.92	495	0.140
50	4	21.80	34.76	4.67	0.21	3.3	50	21.80	34.76	24.12	381	0.250
75	4	20.31	34.85	4.99	0.11	16.3	75	20.31	34.85	24.58	337	0.341
101	10	19.50	34.83	4.75	0.11	4.2	100	19.53	34.83	24.77	319	0.423
126	10	19.07	34.79	4.60	0.11	5.0	150	18.54	34.76	24.97	300	0.580
151	10	18.52	34.76	4.41	0.16	5.0	200	17.53	34.72	25.19	279	0.727
200	10	17.53	34.72	4.41	0.23	5.8	300	14.84	34.60	25.72	229	0.991
250	4	16.36	34.65	4.10	0.38	6.7	400	11.79	34.38	26.18	185	1.207
299	4	14.87	34.60	4.23	0.38	12.5	500	9.15	34.25	26.53	152	1.384
390	4	12.07	34.40	3.64	0.38	25.0	600	7.19	34.18	26.77	129	1.534
487	4	9.40	34.27	3.37	0.68	52.5	700	5.83	34.11	26.88	118	1.666
614	7	6.92	34.16	2.66	0.90	52.5	800	4.57	34.04	26.98	109	1.789
814	7	4.39	34.02	1.49	1.33	110.0	1000	3.62	34.40	27.37	72	1.986
1014	7	3.56	34.43	1.66	2.98	115.0						

SHUMPU MARU; July 11, 1955; 1240-1410 GCT; 27°50'N, 133°10'E; 1316 02 282 1322 1324 1 x x 1000-1 x 2 x x. E11

Z	W	T	S	O_2	PO_4-P	Si	Z	T	S	σ_t	δ_T	ΔD
0		28.1	34.24	4.38	0.03	15.8	0	28.1	34.24	21.81	602	0.000
14	20	27.10	34.40	4.44	0.03	4.2	10	27.39	34.34	22.12	572	0.058
28	20	25.07	34.56	4.64	0.03	4.2	25	25.50	34.52	22.85	502	0.139
52	20	21.85	34.85	4.94	0.03	5.0	50	22.12	34.83	24.08	388	0.251
75	20	20.11	34.78	4.72	0.03	15.0	75	20.11	34.78	24.58	337	0.342
105	18	19.46	34.79	4.51	0.15	4.2	100	19.57	34.79	24.72	324	0.425
128	18	18.84	34.78	4.31	0.15	11.7	150	18.24	34.78	25.06	291	0.581
152	18	18.19	34.78	4.25	0.15	8.3	200	17.26	34.72	25.26	273	0.725
200	18	17.26	34.72	4.24	0.15	9.2	300	15.41	34.61	25.61	239	0.988
285	25	15.72	34.63	4.13	0.28	9.2	400	12.69	34.42	26.02	200	1.103
334	25	14.72	34.58	3.96	0.28	20.0	500	9.63	34.29	26.47	157	1.291
429	25	11.80	34.34	3.64	0.28	38.3	600	7.45	34.25	26.79	127	1.443
524	25	8.90	34.27	3.06	0.34	35.0	700	5.97	34.27	27.01	106	1.568
640	17	6.69	34.25	2.56	0.48	50.0	800	4.77	34.29	27.16	92	1.675
840	17	4.29	34.31	1.46	0.78	68.2	1000	3.65	34.42	27.38	71	1.853
1040	17	3.49	34.45	1.73	1.38	79.5						

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F1 SHUMPU MARU; July 13, 1955; 1345–1430 GCT; 28°30'N, 129°58'E; 1320 02 279 13xx 1335 4 x x 620–3 x x x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.8	34.54	4.32	0.03	10.8		0	27.8	34.54	22.14	570	0.000
12	14	27.71	34.51	4.31	0.03	3.3		10	27.72	34.51	22.14	570	0.057
26	14	27.39	34.54	4.37	0.03	3.3		25	27.41	34.54	22.27	558	0.141
50	14	24.95	34.58	4.52	0.03	3.3		50	24.95	34.58	23.06	482	0.272
76	14	23.62	34.76	4.40	0.06	7.5		75	23.67	34.76	23.57	433	0.387
100	14	22.76	34.81	4.25	0.06	7.5		100	22.76	34.81	23.88	404	0.492
132	20	22.44	34.81	4.34	0.15	4.2		150	21.78	34.83	24.17	376	0.689
155	20	21.59	34.83	4.29	0.15	4.2		200	20.14	34.81	24.60	335	0.870
202	20	20.08	34.81	4.13	0.23	8.3		300	16.93	34.72	25.34	265	1.172
250	20	18.20	34.79	4.07	0.23	9.2		400	14.35	34.58	25.81	220	1.425
307	20	16.75	34.72	4.01	0.31	17.5		500	11.76	34.47	26.25	178	1.635
406	20	14.19	34.58	3.66	0.42	10.0							
505	20	11.63	34.47	3.24	0.48	25.0							
554	20	10.58	34.42	3.12	0.48	90.0							

F2 SHUMPU MARU; July 13, 1955; 1036–1234 GCT; 28°26'N, 130°16'E; 1320 02 282 1323 1326 1 x x 1000–1 x x x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.3	34.54	4.35	0.04	12.5		0	28.3	34.54	21.98	585	0.000
11	10	28.20	34.54	4.30	0.04	-		10	28.21	34.54	22.01	582	0.058
26	10	27.33	34.49	4.36	1.48	3.3		25	27.39	34.49	22.23	561	0.144
50	10	25.80	34.60	4.53	0.06	3.3		50	25.80	34.60	22.81	506	0.277
77	16	23.84	34.70	4.48	0.06	7.5		75	23.99	34.70	23.44	446	0.397
101	16	22.57	34.83	4.21	0.06	3.3		100	22.62	34.83	23.93	399	0.504
125	16	22.07	34.85	4.21	0.06	7.5		150	21.57	34.87	24.26	367	0.697
173	30	21.11	34.89	4.04	0.06	5.8		200	19.87	34.85	24.70	326	0.874
208	30	19.50	34.85	4.07	0.08	8.3		300	17.36	34.76	25.26	272	1.180
256	30	18.44	34.79	4.00	0.15	7.5		400	14.79	34.61	25.74	227	1.440
383	30	15.32	34.67	3.99	0.20	14.2		500	12.04	34.49	26.21	182	1.657
405	40	14.64	34.60	3.79	0.23	15.0		600	9.45	34.38	26.58	147	1.833
580	40	9.85	34.38	3.68	0.48	42.5		700	7.44	34.42	26.92	115	1.975
780	40	5.84	34.43	3.18	0.48	22.5		800	5.57	34.43	27.18	90	2.088
960	40	3.40	34.47	1.69	1.38	95.0		1000	3.38	34.47	27.45	64	2.256
1100	40	3.33	34.47	-	1.38	95.0							

F3 SHUMPU MARU; July 13, 1955; 0730–0841 GCT; 28°22'N, 130°37'E; 1319 02 282 1423 1136 1 40–5 1–2 1000–1 x x x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.4	34.67	4.20	0.04	8.3		0	28.4	34.67	22.04	579	0.000
11	10	28.37	34.69	4.22	0.04	3.3		10	28.37	34.69	22.06	578	0.057
26	10	28.39	34.67	4.25	0.04	3.3		25	28.39	34.67	22.04	579	0.139
50	10	24.99	34.70	4.64	0.04	3.3		50	24.99	34.70	23.14	474	0.271
75	10	23.43	34.87	4.61	0.04	4.2		75	23.45	34.87	23.72	419	0.383
101	10	22.35	34.92	4.47	0.15	4.2		100	22.39	34.92	24.07	386	0.485
126	10	21.39	34.89	4.14	0.15	11.7		150	20.99	34.92	24.46	348	0.671
151	10	20.97	34.92	4.11	0.15	7.5		200	19.87	34.87	24.72	324	0.842
200	10	19.87	34.87	4.04	0.23	7.5		300	17.17	34.74	25.29	269	1.146
270	20	18.10	34.81	4.06	0.21	7.5		400	15.08	34.60	25.67	233	1.407
320	20	16.55	34.70	4.10	0.15	17.5		500	11.80	34.40	26.18	185	1.628
420	20	14.71	34.58	3.96	0.28	25.0		600	9.57	34.29	26.49	155	1.810
498	20	11.84	34.40	3.57	0.48	25.0		700	7.60	34.29	26.79	127	1.963
637	20	8.69	34.25	2.92	0.48	37.5		800	5.80	34.36	27.09	98	2.086
834	20	5.17	34.38	1.77	1.18	75.0		1000	3.71	34.47	27.42	67	2.267
1033	20	3.39	34.49	1.86	1.48	100.0							

SHUMPU MARU; July 13, 1955; 0400-0526 GCT; 28°15'N, 131°00'E; 1317 02 282 1322 1337 1 36-10 1-2 1000-1 x x x x. F4

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁎°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.5	34.60	4.28	0.06	8.3		0	28.5	34.60	21.96	587	0.000
12	15	28.31	34.60	4.19	0.06	4.2		10	28.33	34.60	22.01	582	0.058
26	15	28.18	34.61	4.21	0.06	5.0		25	28.19	34.61	22.07	577	0.145
50	15	24.31	34.72	4.62	0.06	5.0		50	24.31	34.72	23.37	452	0.274
77	22	23.21	34.85	4.72	0.06	5.8		75	23.29	34.83	23.74	417	0.383
100	22	21.93	34.87	4.62	0.06	5.8		100	21.93	34.87	24.16	377	0.483
120	38	20.62	34.89	4.46	0.06	11.7		150	20.12	34.89	24.66	329	0.662
145	38	20.18	34.89	4.50	0.06	7.5		200	19.50	34.85	24.79	317	0.827
195	38	19.57	34.85	4.25	0.06	7.5		300	17.32	34.76	25.27	271	1.128
331	36	16.66	34.72	3.55	0.23	7.5		400	15.11	34.61	25.67	233	1.391
372	36	15.86	34.67	3.91	0.15	15.0		500	12.10	34.42	26.14	189	1.614
383	36	15.62	34.65	4.13	0.19	35.0		600	9.57	34.29	26.49	155	1.798
562	36	10.23	34.29	4.24	0.48	37.5		700	7.83	34.29	26.76	130	1.952
863	45	4.99	34.27	2.13	0.98	50.0		800	6.09	34.27	26.99	108	2.081
1057	45	3.88	34.42	1.49	1.18	80.0		1000	4.21	34.38	27.29	80	2.286
1256	45	3.19	34.52	1.65	0.90	66.7							

SHUMPU MARU; July 13, 1955; 0005-0128 GCT; 28°11'N, 131°30'E; 1217 03 280 1322 2036 1 33-10 1-2 1000-1 x x x x. F5

0		28.4	34.56	4.28	0.06	18.8		0	28.4	34.56	21.96	587	0.000
12	14	28.29	34.54	4.31	0.06	3.3		10	28.31	34.54	21.97	586	0.058
26	14	28.04	34.52	4.35	0.06	4.2		25	28.08	34.52	22.03	580	0.146
50	14	24.90	34.63	4.64	0.06	5.8		50	24.90	34.63	23.12	476	0.277
75	14	22.81	34.89	4.36	0.06	20.0		75	22.81	34.89	23.92	400	0.387
113	30	21.85	34.90	4.58	0.06	5.0		100	22.18	34.90	24.11	382	0.486
134	30	21.09	34.90	4.47	0.06	5.8		150	20.58	34.90	24.55	340	0.668
156	30	20.39	34.90	4.31	0.06	5.8		200	19.39	34.89	24.85	311	0.834
199	30	19.42	34.89	4.20	0.23	5.8		300	17.01	34.74	25.33	266	1.130
322	45	16.49	34.70	4.23	0.23	6.7		400	14.92	34.60	25.71	230	1.388
368	45	15.69	34.65	4.15	0.23	9.2		500	12.41	34.42	26.08	194	1.612
464	45	13.38	34.49	3.84	0.23	25.0		600	10.03	34.29	26.41	163	1.803
563	45	10.70	34.29	3.55	0.48	32.5		700	8.24	34.29	26.70	135	1.963
890	45	4.82	34.31	1.65	0.86	85.0		800	6.44	34.31	26.97	110	2.097
1082	45	3.69	34.45	1.47	1.02	60.0		1000	4.17	34.40	27.31	78	2.302
1276	45	3.03	34.52	1.89	1.02	80.0							

SHUMPU MARU; July 15, 1955; 2030-2144 GCT; 27°05'N, 128°23'E; 1804 01 271 2021 2223 4 32-0 1-2 970-3 x 2 x x. G1

0		27.9	34.49	4.58	0.06	18.8		0	27.9	34.49	22.06	578	0.000
10		27.78	34.49	4.52	0.06	4.2		10	27.78	34.49	22.11	573	0.057
25		27.77	34.52	4.55	0.06	4.2		25	27.77	34.52	22.13	571	0.143
50		26.12	34.61	4.84	0.06	4.2		50	26.12	34.61	22.73	514	0.279
75		24.64	34.67	5.00	0.06	5.8		75	24.64	34.67	23.23	466	0.402
101	10	22.21	34.92	4.85	0.61	5.8		100	22.30	34.90	24.08	385	0.509
126	10	21.53	34.92	4.62	0.78	10.0		150	20.71	34.90	24.52	343	0.693
151	10	20.68	34.90	4.36	0.78	8.3		200	19.02	34.85	24.92	305	0.858
200	10	19.02	34.85	4.29	0.65	9.2		300	16.89	34.76	25.37	262	1.147
250	10	17.72	34.78	4.25	0.78	9.2		400	14.23	34.61	25.86	215	1.396
300	10	16.89	34.76	4.25	0.31	13.3		500	12.29	34.52	26.18	185	1.607
400	10	14.23	34.61	4.04	0.31	25.0		600	8.93	34.33	26.63	142	1.782
500	10	12.29	34.52	3.71	0.48	33.3		700	7.83	34.34	26.80	126	1.927
600	5	8.93	34.33	2.80	0.48	37.5		800	6.72	34.36	26.97	110	2.057
800	5	6.72	34.36	2.29	0.48	52.5							
900	5	6.44	34.36	2.34	0.48	57.5							

NMO

NORPAC

		OBSERVED						INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

G2

SHUMPU MARU; July 15-16, 1955; 2348-0050 GCT; 27°17'N, 128°05'E; 1708 02 277 1721 2535 4 30-0 1-2 780-3 x 2 x x.

0		27.3	34.54	4.46	0.06	8.3	0	27.3	34.54	22.30	555	0.000
10		27.12	34.56	4.45	0.06	3.3	10	27.12	34.56	22.37	548	0.055
25		26.84	34.58	4.48	0.06	3.3	25	26.84	34.58	22.47	538	0.136
50		24.93	34.65	4.72	0.06	3.3	50	24.93	34.65	23.13	475	0.263
75		23.71	34.74	4.66	0.15	5.0	75	23.71	34.74	23.55	435	0.378
100		22.52	34.85	4.44	0.15	5.0	100	22.52	34.85	23.97	395	0.482
125		21.81	34.87	4.34	0.15	6.7	150	20.85	34.87	24.45	349	0.670
150		20.85	34.87	4.29	0.15	10.0	200	19.44	34.87	24.82	314	0.839
200	12	19.44	34.87	4.14	0.18	8.3	300	15.91	34.65	25.53	247	1.130
250	12	18.08	34.79	4.23	0.18	6.7	400	13.58	34.54	25.94	208	1.368
300	12	15.91	34.65	4.01	0.19	13.3	500	11.57	34.42	26.24	179	1.573
400	12	13.58	34.54	3.80	0.36	21.7	600	9.11	34.38	26.64	141	1.744
527	20	11.03	34.38	3.33	0.38	32.5	700	7.84	34.36	26.82	124	1.888
612	20	8.79	34.38	2.77	0.98	42.5						
755	20	7.24	34.36	2.43	0.58	50.0						

G3

SHUMPU MARU; July 16, 1955; 0310-0405 GCT; 27°30'N, 127°45'E; 2110 02 278 2221 2636 1 28-0 1-2 770-3 x 2 x x.

0		27.4	34.60	4.45	0.04	10.0	0	27.4	34.60	22.31	554	0.000
10	3	27.24	34.54	4.43	0.04	2.5	10	27.24	34.54	22.32	553	0.055
25	3	27.09	34.56	4.55	0.06	3.3	25	27.09	34.56	22.38	547	0.137
50	3	25.20	34.65	4.64	0.06	3.3	50	25.20	34.65	23.03	485	0.267
75	5	23.54	34.74	4.62	0.06	11.3	75	23.54	34.74	23.60	430	0.382
100	5	22.66	34.81	4.57	0.18	4.2	100	22.66	34.81	23.91	401	0.487
127	4	21.82	34.85	4.53	0.18	12.5	150	21.14	34.85	24.36	358	0.679
152	4	21.08	34.85	4.50	0.18	6.7	200	20.09	34.83	24.63	332	0.854
200	4	20.09	34.83	4.27	0.23	12.5	300	16.78	34.74	25.39	260	1.160
250	4	18.71	34.81	4.18	0.23	5.0	400	14.59	34.58	25.76	225	1.413
298	4	16.82	34.74	4.17	0.23	10.0	500	11.72	34.43	26.23	180	1.626
400	8	14.59	34.58	4.00	0.23	30.0	600	8.77	34.43	26.73	133	1.794
500	8	11.72	34.43	3.35	1.25	50.0	700	7.09	34.42	26.97	110	1.926
600	8	8.77	34.43	2.76	0.74	35.0						
700	8	7.09	34.42	2.39	0.90	55.0						

G4

SHUMPU MARU; July 16, 1955; 0618-0730 GCT; 27°41'N, 127°28'E; 2013 21 286 2022 2535 1 26-0 1-2 1800-3 x 2 x x.

0		28.4	34.42	4.53	0.06	12.5	0.43	0	28.4	34.42	21.85	598	0.000
10	6	28.21	34.42	4.47	0.29	3.3	0.60	10	28.21	34.42	21.91	592	0.059
25	6	28.20	34.47	4.50	0.06	4.2	0.60	25	28.20	34.47	21.96	587	0.148
50	6	26.79	34.52	4.61	0.04	4.2	0.60	50	26.79	34.52	22.45	540	0.289
76	8	25.51	34.54	4.76	0.04	8.3	0.60	75	25.56	34.54	22.85	502	0.420
101	8	24.56	34.60	4.73	0.04	4.2	0.73	100	24.60	34.60	23.18	471	0.542
126	8	23.33	34.70	4.76	0.04	8.3	0.53	150	22.22	34.79	24.03	388	0.759
151	8	22.17	34.79	4.57	0.20	8.3	0.67	200	20.62	34.81	24.47	348	0.947
200	8	20.62	34.81	4.44	0.20	10.0	0.67	300	17.95	34.72	25.09	288	1.275
256	10	19.44	34.81	4.38	0.20	7.5	0.67	400	14.64	34.58	25.74	227	1.542
301	10	17.92	34.72	4.21	0.28	13.3	0.80	500	11.54	34.54	26.34	170	1.751
396	10	14.77	34.58	4.01	0.48	30.0	1.07	600	9.04	34.29	26.58	147	1.920
495	10	11.66	34.54	3.45	0.48	35.0	1.67	700	7.04	34.29	26.87	119	2.064
635	16	8.15	34.27	2.71	0.98	43.3	1.67	800	5.31	34.33	27.12	96	2.182
835	16	4.70	34.34	1.80	1.18	70.0	2.00	1000	4.43	34.36	27.25	83	2.377
1034	16	4.37	34.36	1.83	1.48	80.0	2.00						

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ∠°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHUMPU MARU; July 16, 1955; 0945-1124 GCT; 27°54'N, 127°10'E; 1609 21 278 1621 2322 1 27-0 2 1000-1 x x x x. G5

0		28.1	34.33	4.42	0.03	16.7	0	28.1	34.33	21.88	595	0.000
10		27.65	34.42	4.45	0.03	4.2	10	27.65	34.42	22.09	575	0.058
25		27.19	34.47	4.52	0.03	5.0	25	27.19	34.47	22.28	557	0.143
50		26.75	34.49	4.49	0.03	5.0	50	26.75	34.49	22.44	541	0.281
86	25	26.38	34.49	4.43	0.06	16.7	75	26.49	34.49	22.51	535	0.416
109	25	26.07	34.61	4.46	0.03	5.0	100	26.19	34.56	22.67	519	0.548
131	25	25.28	34.69	4.36	0.03	16.7	150	23.85	34.81	23.56	434	0.789
154	25	23.55	34.83	4.21	0.06	9.2	200	20.25	34.83	24.59	336	0.985
199	25	20.28	34.83	3.96	0.06	18.3	300	16.86	34.69	25.32	267	1.295
280	30	17.62	34.72	4.09	0.06	8.3	400	13.52	34.51	25.92	210	1.543
330	30	15.73	34.63	4.01	0.36	13.3	500	10.64	34.34	26.35	169	1.743
430	30	12.42	34.45	3.38	0.78	32.5	600	8.59	34.33	26.57	148	1.912
530	30	9.88	34.31	3.01	0.78	50.0	700	6.74	34.33	26.94	113	2.054
735	40	6.09	34.33	2.11	1.48	60.0	800	5.53	34.33	27.10	98	2.170
904	40	4.63	34.33	1.73	1.48	85.0	1000	4.44	34.36	27.25	83	2.368
1138	35	4.16	34.40	1.71	1.98	66.7						

SHUMPU MARU; July 16, 1955; 1345-1507 GCT; 28°05'N, 126°51'E; 1615 21 279 xxxx xxxx 1 x x 1190-3 x 2 x x. G6

0		28.0	34.45	3.96	0.03	16.7	0	28.0	34.45	22.00	583	0.000
10	0	27.84	34.47	4.03	0.06	3.3	10	27.84	34.47	22.08	576	0.057
25	0	27.42	34.61	4.19	0.06	3.3	25	27.42	34.61	22.32	553	0.142
50	0	26.49	34.60	4.02	0.06	5.0	50	26.49	34.60	22.60	526	0.277
83	20	25.89	34.63	3.98	0.06	11.7	75	26.04	34.63	22.77	510	0.408
106	20	25.69	34.65	4.00	0.06	5.0	100	25.74	34.65	22.87	500	0.535
130	20	25.00	34.72	4.01	0.06	15.0	150	23.94	34.78	23.51	439	0.772
153	20	23.80	34.79	4.21	0.06	11.7	200	21.91	34.87	24.17	376	0.979
200	20	21.91	34.87	4.33	0.06	11.7	300	14.83	34.63	25.75	226	1.269
248	32	17.17	34.79	3.70	0.23	10.8	400	11.28	34.43	26.31	173	1.477
287	32	15.30	34.67	3.83	0.28	16.7	500	8.39	34.40	26.76	130	1.636
368	32	12.37	34.47	3.25	0.48	27.5	600	6.77	34.38	26.98	109	1.764
452	32	9.49	34.40	3.14	0.58	40.0	700	5.88	34.36	27.09	98	1.877
545	45	7.36	34.40	2.41	0.78	55.0	800	5.31	34.36	27.15	93	1.981
664	45	6.09	34.36	2.16	1.13	65.0						
812	45	5.24	34.36	1.91	1.38	80.0						

SHUMPU MARU; July 16, 1955; 1724-1759 GCT; 28°18'N, 126°32'E; 1809 02 270 xxxx xxxx 1 x x 160-3 x 2 x x. G7

0		26.0	33.78	4.57	0.03	9.2	0	26.0	33.78	22.14	570	0.000
10	0	25.51	33.80	4.31	0.18	4.2	10	25.51	33.80	22.31	554	0.056
25	0	25.47	33.84	4.51	0.15	7.5	25	25.47	33.84	22.34	551	0.139
54	18	25.14	34.13	4.26	0.03	3.3	50	25.19	34.09	22.62	524	0.273
77	18	24.57	34.56	3.83	0.03	8.3	75	24.52	34.52	23.15	473	0.399
102	18	23.17	34.60	3.90	0.15	5.0	100	23.28	34.60	23.56	434	0.513
126	18	22.26	34.65	3.78	0.03	14.2						
140	18	20.73	34.74	3.85	0.18	10.0						

SHUMPU MARU; July 16, 1955; 2022-2050 GCT; 28°30'N, 126°14'E; 1603 02 256 18xx 2023 1 x x 120-3 x 2 x x. G8

0		24.3	34.04	4.29	0.03	6.7	0	24.3	34.04	22.85	502	0.000
12	10	23.43	34.49	4.15	0.11	4.2	10	23.61	34.42	23.34	455	0.047
27	10	23.47	34.54	4.09	0.11	5.8	25	23.47	34.54	23.46	444	0.115
51	10	23.25	34.49	4.03	0.03	4.2	50	23.29	34.49	23.48	442	0.226
76	10	22.98	34.61	4.05	0.03	5.8	75	22.99	34.61	23.66	425	0.335
100	10	21.74	34.63	4.02	0.03	5.8	100	21.74	34.63	24.04	388	0.438

G9

SHUMPU MARU; July 16, 1955; 2315-2337 GCT; 28°43'N, 125°56'E; 1807 02 254 2021 2022 1 18-0 4 112-3 x 2 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δT_S^5 10^{-5} cm^3/g	ΔD dyn. m
0		24.3	34.25	4.39	0.03	10.0		0	24.3	34.25	23.01	487	0.000
10	0	23.82	34.25	4.37	0.03	4.2		10	23.82	34.25	23.16	472	0.047
25	0	23.63	34.24	4.26	0.23	4.2		25	23.63	34.24	23.19	470	0.118
50	0	23.12	34.25	4.22	0.23	4.2		50	23.12	34.25	23.35	454	0.234
75	0	21.30	34.56	3.95	0.23	10.0		75	21.30	34.56	24.10	383	0.339
100	0	19.54	34.70	3.69	0.28	8.3		100	19.54	34.70	24.67	328	0.429

G10

SHUMPU MARU; July 17, 1955; 0208-0230 GCT; 28°54'N, 125°38'E; 1608 02 250 1321 1722 1 12-0 5 110-3 x 2 x x.

0		23.9	33.73	4.49	0.06	8.3		0	23.9	33.73	22.74	513	0.000
10	0	23.16	33.84	4.46	0.28	7.5		10	23.16	33.84	23.03	485	0.049
25	0	22.65	33.95	4.35	0.28	8.3		25	22.65	33.95	23.25	464	0.121
50	0	22.38	34.20	4.10	0.28	8.3		50	22.38	34.20	23.53	437	0.234
75	0	19.81	34.67	3.59	0.42	12.5		75	19.81	34.67	24.56	339	0.331
100	0	18.12	34.54	3.33	0.58	10.8		100	18.12	34.54	24.91	306	0.412

G11

SHUMPU MARU; July 17, 1955; 0458-0520 GCT; 29°06'N, 125°18'E; 1609 02 266 16x1 1832 1 16-0 6 92-3 x 2 x x.

0		24.1	33.53	4.57	0.06	11.7		0	24.1	33.53	22.53	533	0.000
10	0	23.62	33.96	4.21	0.23	4.2		10	23.62	33.96	22.99	489	0.051
25	0	23.21	33.95	4.40	0.23	5.0		25	23.21	33.95	23.10	478	0.123
50	0	21.33	34.29	4.02	0.48	5.0		50	21.33	34.29	23.89	403	0.284
75	0	18.22	34.58	3.27	0.48	14.2		75	18.22	34.58	24.92	305	0.373
85	0	18.21	34.54	3.23	0.36	11.7							

G12

SHUMPU MARU; July 17, 1955; 0740-0800 GCT; 29°18'N, 125°00'E; 1408 02 275 1421 1822 1 13-0 6 82-3 x 2 x x.

0		24.6	31.80	4.58	0.03	8.3		0	24.6	31.80	21.06	673	0.000
11	10	23.77	33.91	4.46	0.03	4.2		10	23.85	33.69	22.72	514	0.059
26	10	23.74	33.95	4.34	0.03	6.7		25	23.74	33.95	22.93	494	0.135
50	10	18.64	34.51	3.45	0.18	10.8		50	18.64	34.51	24.75	321	0.237
75	10	18.21	34.49	3.32	0.03	14.2		75	18.21	34.49	24.84	312	0.316

H1

SHUMPU MARU; July 17, 1955; 1729-1744 GCT; 30°05'N, 126°08'E; 1106 02 250 xxxx xxxx 1 x x 72-3 x 2 x x.

0		24.2	33.50	4.82	0.29	15.0		0	24.2	33.50	22.47	538	0.000
10	0	23.32	33.50	4.62	0.28	5.8		10	23.32	33.50	22.73	514	0.052
25	0	22.92	33.48	4.36	0.23	7.5		25	22.92	33.48	22.83	504	0.129
50	0	21.06	33.80	3.98	0.23	9.2		50	21.06	33.80	23.59	431	0.246
65	0	20.42	34.07	3.78	0.38	15.8							

H2

SHUMPU MARU; July 17, 1955; 1402-1415 GCT; 29°49'N, 125°45'E; 1408 01 252 xxxx xxxx 1 x x 68-3 x x x x.

0		24.6	33.37	4.55	0.06	9.2		0	24.6	33.37	22.25	559	0.000
10	0	23.62	33.53	4.63	0.23	6.7		10	23.62	33.53	22.66	520	0.053
25	0	23.33	33.69	4.32	0.03	6.7		25	23.33	33.69	22.86	501	0.130
50	0	22.97	33.80	4.18	0.28	6.7		50	22.97	33.80	23.05	483	0.247
60	0	20.20	34.27	3.61	0.03	10.0							

H3

SHUMPU MARU; July 17, 1955; 1048-1108 GCT; 29°33'N, 125°22'E; 1607 02 252 1821 2222 1 x x 88-3 x 2 x x.

0		24.4	32.30	4.87	0.01	10.8		0	24.4	32.30	21.51	630	0.000
10	0	23.58	33.78	4.78	0.01	8.3		10	23.58	33.78	22.86	501	0.056
25	0	23.42	33.87	4.59	0.16	8.3		25	23.42	33.87	22.98	490	0.130
50	0	22.95	33.95	4.41	0.16	9.2		50	22.95	33.95	23.16	472	0.251
75	0	18.47	34.72	3.54	0.01	15.8		75	18.47	34.72	24.96	301	0.348
80	0	18.50	34.51	3.55	0.01	12.5							

SHUMPU MARU; July 19, 1955; 0438-0516 GCT; 28°30'N, 129°22'E; 0306 03 289 0321 0533 1 31-20 1-2 350-3 x 2 x x. I1

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁎°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		28.4	34.49	4.56	0.04	4.2		0	28.4	34.49	21.91	592	0.000
10	0	27.70	34.52	4.64	0.04	2.5		10	27.70	34.52	22.16	568	0.058
25	0	26.63	34.61	4.64	0.04	2.5		25	26.63	34.61	22.57	529	0.140
51	0	25.77	34.69	4.86	0.04	2.5		50	25.79	34.69	22.88	499	0.269
76	0	24.97	34.72	4.76	0.04	5.0		75	25.00	34.72	23.16	472	0.391
100	0	23.77	34.78	4.56	0.04	3.3		100	23.77	34.78	23.56	434	0.505
125	0	23.43	34.76	4.63	0.18	5.8		150	21.63	34.79	24.18	375	0.709
150	24	21.63	34.79	4.35	0.23	5.8		200	19.81	34.83	24.70	326	0.888
200	24	19.81	34.83	4.25	0.23	5.8							
250	24	18.27	34.79	4.16	0.18	4.2							
290	24	17.59	34.76	4.12	0.18	5.8							

SHUMPU MARU; July 19, 1955; 0137-0240 GCT; 28°41'N, 129°05'E; 0512 02 285 0621 0734 1 27-10 2 780-3 x 2 x x. I2

0		28.9	34.56	4.42	0.18	13.3		0	28.9	34.56	21.79	603	0.000
10	0	28.72	34.56	4.56	0.23	2.5		10	28.72	34.56	21.86	597	0.060
25	0	28.68	34.54	4.56	0.18	2.5		25	28.68	34.54	21.85	598	0.149
50	0	28.60	34.54	4.51	0.23	2.5		50	28.60	34.54	21.88	595	0.299
78	15	26.92	34.67	4.79	0.18	5.8		75	27.10	34.65	22.45	540	0.441
102	15	25.90	34.63	4.70	0.18	5.0		100	25.99	34.63	22.78	509	0.561
127	15	25.11	34.67	4.56	0.23	10.0		150	24.03	34.79	23.49	441	0.776
151	15	23.98	34.79	4.56	0.23	5.8		200	21.65	34.85	24.23	370	0.982
184	28	22.31	34.85	4.42	0.29	-		300	17.85	34.76	25.14	284	1.314
226	28	20.59	34.87	4.30	0.29	-		400	15.33	34.63	25.64	236	1.585
270	28	18.73	34.79	4.27	0.29	10.0		500	13.42	34.52	25.96	206	1.818
360	28	16.10	34.67	4.10	0.48	20.0		600	9.10	34.36	26.63	142	2.003
526	35	12.92	34.51	3.73	0.48	30.0		700	7.10	34.34	26.91	116	2.143
607	35	8.74	34.34	2.82	0.65	40.0							
695	35	7.19	34.34	2.52	1.33	50.0							

SHUMPU MARU; July 18, 1955; 2215-2320 GCT; 28°54'N, 128°47'E; 0714 02 285 0721 0734 1 24-0 2-3 980-3 x 2 x x. I3

0		28.6	34.49	4.35	0.06	13.3		0	28.6	34.49	21.84	599	0.000
10	0	28.51	34.51	4.27	0.06	4.2		10	28.51	34.51	21.88	595	0.059
25	0	28.54	34.51	4.42	0.06	4.2		25	28.54	34.51	21.88	595	0.149
50	0	27.48	34.58	4.51	0.06	5.8		50	27.48	34.58	22.27	558	0.293
75	0	26.05	34.67	4.47	0.06	11.7		75	26.05	34.67	22.79	508	0.427
100	0	24.73	34.74	4.46	0.23	5.8		100	24.73	34.74	23.25	464	0.549
125	0	23.89	34.89	4.19	0.06	12.5		150	22.89	34.85	23.87	405	0.769
150	0	22.89	34.85	4.24	0.48	12.5		200	21.34	34.87	24.33	361	0.964
204	8	21.34	34.87	4.22	0.38	18.3		300	17.46	34.76	25.24	274	1.296
254	8	19.97	34.85	4.15	0.15	10.0		400	14.17	34.58	25.85	216	1.551
283	8	18.06	34.79	4.06	0.15	16.7		500	11.69	34.45	26.25	178	1.758
378	8	14.71	34.60	3.84	0.58	23.3		600	8.83	34.33	26.64	141	1.929
518	10	11.25	34.43	3.29	0.78	42.5		700	7.07	34.34	26.92	115	2.068
617	10	8.32	34.31	2.67	0.73	50.0		800	5.56	34.40	27.15	93	2.182
816	10	5.32	34.40	1.93	0.98	80.0							

I4

SHUMPU MARU; July 18, 1955; 1702-1830 GCT; 29°05'N, 128°28'E; 0917 02 278 xxxx xxxx 1 x x 630-3 x 2 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	ϰ°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		28.5	34.52	4.45	0.04	10.0		0	28.5	34.52	21.90	593	0.000
10	0	28.60	34.51	4.40	0.04	2.5		10	28.60	34.51	21.85	598	0.059
25	0	28.58	34.51	4.43	0.04	3.3		25	28.58	34.51	21.86	597	0.149
53	14	27.11	34.61	4.48	0.04	3.3		50	27.27	34.60	22.35	550	0.293
78	14	26.39	34.70	4.34	0.04	6.7		75	26.47	34.69	22.68	518	0.427
101	14	25.26	34.83	4.42	0.04	4.2		100	25.31	34.83	23.14	474	0.552
126	14	24.24	34.90	4.35	0.06	6.7		150	23.28	34.85	23.76	415	0.776
150	14	23.28	34.85	4.31	0.06	5.8		200	22.19	34.85	24.07	386	0.980
225	26	21.64	34.85	4.35	0.06	12.5		300	18.56	34.79	24.99	298	1.331
266	26	19.78	34.87	4.13	0.23	6.7		400	15.55	34.69	25.64	236	1.609
314	26	18.05	34.78	4.13	0.23	12.5		500	11.13	34.43	26.34	170	1.824
407	26	15.35	34.69	3.90	0.23	25.0							
505	30	10.90	34.42	3.31	0.48	45.0							
579	30	8.86	34.34	2.84	0.78	45.0							

I5

SHUMPU MARU; July 18, 1955; 1240-1420 GCT; 29°17'N, 128°09'E; 1019 01 280 xxxx xxxx 1 x x 1140-3 x 2 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	ϰ°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		28.3	34.51	4.46	0.03	15.8		0	28.3	34.51	21.95	588	0.000
10	0	28.13	34.47	4.43	0.03	3.3		10	28.13	34.47	21.98	585	0.058
25	0	27.27	34.42	4.52	0.03	3.3		25	27.27	34.42	22.22	562	0.144
50	0	26.61	34.52	4.58	0.03	3.3		50	26.61	34.52	22.51	535	0.282
89	25	24.33	34.69	4.65	0.03	6.7		75	25.21	34.63	23.02	486	0.410
114	25	23.69	34.87	4.11	0.03	6.7		100	24.05	34.76	23.47	443	0.527
135	25	23.16	34.92	4.10	0.03	20.8		150	22.67	34.90	23.97	395	0.739
156	25	22.47	34.90	4.09	0.03	16.7		200	20.65	34.89	24.52	343	0.927
199	25	20.75	34.89	4.18	0.23	16.7		300	17.01	34.76	25.35	264	1.224
227	28	18.00	34.83	3.91	0.48	12.5		400	13.86	34.61	25.94	208	1.470
326	28	16.66	34.74	3.88	0.23	18.3		500	9.82	34.38	26.52	153	1.661
426	28	12.88	34.56	3.48	0.23	28.3		600	7.53	34.34	26.85	121	1.808
524	28	8.82	34.33	3.17	-	40.0		700	6.03	34.36	27.07	100	1.928
680	33	6.17	34.36	2.15	0.78	40.0		800	5.31	34.40	27.18	90	2.032
877	33	4.76	34.42	1.78	0.98	50.0		1000	4.47	34.45	27.32	77	2.217
1072	35	4.30	34.47	-	-	-							

I6

SHUMPU MARU; July 18, 1955; 0858-1009 GCT; 29°29'N, 127°51'E; 0814 02 280 0723 0924 1 17-0 4 1180-3 x 2 x x.

OBSERVED								INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD
m	ϰ°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		27.0	33.91	4.51	0.08	17.5	0.27	0	27.0	33.91	21.93	590	0.000
10	0	26.30	33.96	4.55	0.06	5.0	0.23	10	26.30	33.96	22.18	566	0.057
25	0	25.68	34.09	4.86	0.06	5.0	0.30	25	25.68	34.09	22.47	538	0.140
50	0	25.11	34.40	4.36	0.06	5.0	0.30	50	25.11	34.40	22.87	500	0.270
76	6	24.06	34.40	4.37	0.06	10.0	0.33	75	24.10	34.40	23.18	471	0.392
100	6	22.08	34.47	4.06	0.18	10.0	0.40	100	22.08	34.47	23.82	409	0.503
125	6	21.08	34.74	3.81	0.18	10.8	0.50	150	19.81	34.81	24.69	327	0.689
150	6	19.81	34.81	3.83	0.08	12.5	0.50	200	16.44	34.69	25.43	256	0.838
200	6	16.44	34.69	3.83	0.18	14.2	0.50	300	12.51	34.47	26.10	192	1.066
270	20	13.32	34.51	3.52	0.18	17.5	0.57	400	10.45	34.38	26.41	162	1.251
320	20	11.98	34.43	3.30	0.48	25.0	0.67	500	8.27	34.31	26.71	134	1.407
417	20	10.12	34.36	2.96	-	40.0	0.83	600	6.56	34.31	26.96	111	1.538
515	20	7.94	34.29	2.80	0.78	40.0	1.20	700	5.78	34.36	27.09	98	1.650
582	18	6.70	34.31	2.24	1.23	50.0	1.33	800	5.19	34.38	27.18	90	1.753
758	18	5.33	34.38	1.89	1.38	75.0	1.33						
958	18	4.66	34.42	1.83	1.18	90.0	1.53						

OBSERVED								INTERPOLATED			COMPUTED			
Z	W	T	S	O_2	PO_4-P	Si	Tot. P.	Z	T	S	σ_t	δ_T	ΔD	
m	⁄°	°C	‰	ml/L	μg at/L	μg at/L	μg at/L	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m	
SHUMPU MARU; July 18, 1955; 0452-0520 GCT; 29°45'N, 127°25'E; 1215 02 283 1222 1224 1 20-0 170-3 x 2 x x.														I7
0		28.0	32.02	4.44	0.11	16.7		0	28.0	32.02	20.18	758	0.000	
10	6	27.84	32.02	4.37	0.06	2.5		10	27.84	32.02	20.23	753	0.075	
25	6	26.86	32.34	4.52	0.06	3.3		25	26.86	32.34	20.79	699	0.184	
50	6	23.64	34.51	4.51	0.15	2.5		50	23.64	34.51	23.39	450	0.328	
76	12	22.03	34.79	4.00	0.15	12.5		75	22.09	34.78	24.05	388	0.433	
101	12	19.87	34.76	3.75	0.15	6.7		100	19.96	34.76	24.61	334	0.524	
125	12	17.30	34.70	3.75	0.15	20.0		150	13.99	34.56	25.87	214	0.663	
150	12	13.99	34.56	3.61	0.28	20.0								
164	12	13.63	34.52	3.59	0.18	22.0								
SHUMPU MARU; July 18, 1955; 0042-0105 GCT; 30°03'N, 126°57'E; 1111 02 277 1121 1122 1 20-10 4 102-3 x 2 x x.														I8
0		27.1	31.89	4.48	0.06	10.8		0	27.1	31.89	20.37	740	0.000	
10	0	26.62	32.50	4.52	0.28	5.8		10	26.62	32.50	20.99	680	0.071	
25	0	25.51	32.92	4.51	0.06	6.3		25	25.51	32.92	21.64	618	0.168	
50	0	19.50	34.11	4.05	0.06	10.0		50	19.50	34.11	24.23	370	0.292	
75	0	18.39	34.51	3.30	0.06	13.3		75	18.39	34.51	24.81	315	0.378	
95	0	18.43	34.52	3.33	0.32	11.7								
SHUMPU MARU; July 17, 1955; 2042-2115 GCT; 30°20'N, 126°30'E; 1308 02 264 13x1 1323 1 19-0 5 82-3 x 2 x x.														I9
0		26.0	28.95	4.69	0.03	17.5		0	26.0	28.95	18.51	919	0.000	
10	0	24.92	30.66	4.84	0.03	7.5		10	24.92	30.66	20.12	764	0.084	
25	0	17.66	32.54	5.37	0.03	12.5		25	17.66	32.54	23.49	441	0.174	
50	0	14.86	33.35	4.90	0.36	12.5		50	14.86	33.35	24.75	321	0.270	
75	0	14.81	33.35	4.85	0.32	18.3		75	14.81	33.35	24.76	320	0.351	
SHUMPU MARU; July 22, 1955; 1945-2025 GCT; 30°18'N, 130°19'E; 2214 80 278 xxxx 2524 4 x x 450-3 x 2 x x.														J1
0		27.6	33.87	4.53	0.06	13.3		0	27.6	33.87	21.72	610	0.000	
10	0	27.78	34.36	4.46	0.06	3.3		10	27.78	34.36	22.01	582	0.059	
25	0	26.77	34.51	4.61	0.18	3.3		25	26.77	34.51	22.45	540	0.143	
50	0	25.40	34.61	4.45	0.06	3.3		50	25.40	34.61	22.95	493	0.273	
75	0	23.81	34.63	4.33	0.06	13.3		75	23.81	34.63	23.44	446	0.391	
100	0	22.74	34.78	4.13	0.06	5.0		100	22.74	34.78	23.86	406	0.498	
125	0	21.04	34.85	4.17	0.18	17.5		150	19.54	34.96	24.87	309	0.679	
150	0	19.54	34.96	3.99	0.23	14.2		200	16.08	34.63	25.48	251	0.822	
192	10	16.54	34.65	3.87	0.61	23.3		300	12.79	34.49	26.06	196	1.049	
231	10	14.28	34.56	3.64	0.86	18.3								
271	10	13.62	34.54	3.57	0.58	25.0								
360	10	11.08	34.40	3.29	0.73	37.5								
SHUMPU MARU; July 22, 1955; 1635-1719 GCT; 30°05'N, 130°13'E; 2017 01 275 xxxx xxxx 4 x x 420-3 x 2 x x.														J2
0		27.5	33.87	4.43	0.06	10.8		0	27.5	33.87	21.74	608	0.000	
10	0	27.42	34.29	4.55	0.06	3.3		10	27.42	34.29	22.07	577	0.059	
25	0	26.43	34.43	4.59	0.08	4.2		25	26.43	34.43	22.50	536	0.142	
50	0	25.44	34.45	4.54	0.08	5.8		50	25.44	34.45	22.82	505	0.273	
74	10	25.01	34.61	4.43	0.06	10.8		75	24.97	34.61	23.08	480	0.397	
98	10	24.16	34.81	4.30	0.06	3.3		100	24.03	34.81	23.51	439	0.512	
123	10	22.52	34.83	4.26	0.06	13.3		150	20.84	34.85	24.44	350	0.712	
148	10	21.05	34.85	4.21	0.18	10.8		200	17.52	34.74	25.21	277	0.872	
188	10	17.83	34.76	4.15	0.15	23.3		300	11.78	34.45	26.23	180	1.108	
230	10	16.76	34.70	3.86	0.23	10.8								
274	10	12.66	34.49	3.56	0.38	35.0								
319	10	11.14	34.43	3.33	0.98	50.0								

NMO

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Si μg at/L	Tot. P. μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

J3 SHUMPU MARU; July 22, 1955; 1425-1512 GCT; 29°51'N, 130°07'E; 1811 02 276 xxxx xxxx 1 x x 520-3 x 2 x x.

0		27.2	33.95	4.50	0.03	6.7	0	27.2	33.95	21.88	593	0.000
10	6	27.22	34.04	4.52	0.06	3.3	10	27.22	34.04	21.95	588	0.059
25	6	26.88	34.09	4.80	0.06	3.3	25	26.88	34.09	22.09	575	0.146
50	6	26.30	34.38	4.28	0.15	3.3	50	26.30	34.38	22.49	537	0.285
77	10	25.59	34.38	-	0.15	6.7	75	25.64	34.38	22.72	514	0.417
101	10	24.51	34.52	-	0.15	3.3	100	24.56	34.52	23.14	474	0.542
126	10	22.78	34.74	4.32	0.06	10.8	150	22.38	34.83	24.00	392	0.761
151	10	22.36	34.83	4.29	0.15	5.0	200	20.73	34.85	24.47	348	0.949
200	10	20.73	34.85	4.27	0.15	10.8	300	13.69	34.52	25.92	210	1.228
252	32	16.56	34.67	3.83	0.28	10.8	400	9.87	34.40	26.52	153	1.418
295	32	13.88	34.54	3.62	0.48	23.8						
393	32	10.13	34.40	2.99	0.61	37.5						
447	32	8.14	34.36	2.69	0.61	42.5						

J4 SHUMPU MARU; July 22, 1955; 1202-1300 GCT; 29°37'N, 130°01'E; 1612 01 274 xxxx xxxx 1 x x 660-3 x 2 x x.

0		27.6	33.87	4.54	0.23	12.5	0	27.6	33.87	21.71	611	0.000
10	6	27.58	33.87	4.55	0.23	3.3	10	27.58	33.87	21.71	611	0.061
25	6	26.89	33.91	4.60	0.23	3.3	25	26.89	33.91	21.96	587	0.151
50	6	26.35	34.34	4.58	0.06	3.3	50	26.35	34.34	22.45	540	0.292
75	6	25.64	34.70	4.50	0.06	11.7	75	25.64	34.70	22.94	493	0.422
100	10	24.55	34.76	4.43	0.06	3.3	100	24.55	34.76	23.32	457	0.541
125	10	22.82	34.83	4.43	0.48	11.7	150	22.37	34.87	24.04	388	0.755
150	10	22.37	34.87	4.32	0.06	11.7	200	20.87	34.89	24.46	348	0.942
200	10	20.87	34.89	4.28	0.15	12.5	300	18.42	34.79	25.03	294	1.271
250	10	19.58	34.85	4.23	0.15	4.2	400	13.99	34.56	25.87	214	1.535
288	30	19.00	34.83	4.17	0.18	11.7	500	10.87	34.45	26.39	165	1.735
375	30	14.83	34.60	3.87	0.05	27.5						
472	30	11.56	34.45	3.33	0.03	60.0						
571	30	9.11	34.45	2.93	0.98	37.5						

J5 SHUMPU MARU; July 22, 1955; 0910-1026 GCT; 29°21'N, 129°55'E; 0000 25 269 2721 1622 4 26-0 1-2 1050-3 x 2 x x.

0		28.5	34.47	4.22	0.03	13.3	0	28.5	34.47	21.89	594	0.000
10	0	28.10	34.52	4.27	0.06	3.3	10	28.10	34.52	22.02	581	0.058
25	0	27.95	34.49	4.33	0.03	3.3	25	27.95	34.49	22.05	579	0.145
50	0	27.68	34.42	4.37	0.06	5.0	50	27.68	34.42	22.08	576	0.290
75	0	26.20	34.58	4.41	0.06	13.3	75	26.20	34.58	22.68	518	0.427
100	0	25.57	34.69	4.60	0.06	5.0	100	25.57	34.69	22.95	493	0.555
125	0	24.45	34.74	4.61	0.06	17.5	150	23.98	34.79	23.51	439	0.790
150	0	23.98	34.79	4.51	0.06	13.3	200	21.95	34.90	24.18	375	0.997
204	12	22.09	34.92	4.32	0.28	20.8	300	17.60	34.78	25.22	276	1.324
243	12	19.62	34.87	4.17	0.31	5.0	400	13.29	34.52	25.98	204	1.574
286	12	18.28	34.81	4.05	0.31	20.0	500	10.93	34.43	26.37	167	1.770
376	12	13.86	34.54	3.70	0.48	37.5	600	8.65	34.36	26.69	136	1.933
545	25	9.87	34.40	3.04	0.86	50.0	700	6.84	34.36	26.96	111	2.067
640	25	7.76	34.34	2.60	0.98	50.0	800	5.30	34.38	27.17	91	2.177
900	25	3.77	34.42	1.55	1.48	80.0						

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ϰ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHUMPU MARU; July 22, 1955; 0645-0757 GCT; 29°09'N, 129°49'E; 2916 80 277 2521 2032 4 26-10 1-2 1180-3 x 2 x x. J6

0		29.0	34.43	4.31	0.05	4.2	0	29.0	34.43	21.66	616	0.000
10	0	28.87	34.43	4.35	0.05	2.5	10	28.87	34.43	21.71	611	0.061
25	0	28.63	34.51	4.35	0.15	2.5	25	28.63	34.51	21.84	599	0.152
50	0	28.45	34.52	4.46	0.04	2.5	50	28.45	34.52	21.92	591	0.301
77	10	27.51	34.56	4.45	0.04	14.2	75	27.58	34.56	22.22	562	0.446
101	10	26.42	34.67	4.48	0.04	3.3	100	26.47	34.67	22.66	520	0.582
126	10	26.14	34.70	4.47	0.04	14.2	150	25.11	34.76	23.15	473	0.837
151	10	25.07	34.76	4.04	0.06	10.0	200	22.04	34.85	24.12	381	1.054
200	10	22.04	34.85	4.17	0.23	13.3	300	19.34	34.85	24.84	312	1.410
257	26	20.70	34.89	4.01	0.06	5.0	400	15.33	34.65	25.65	235	1.695
301	26	19.31	34.85	3.99	0.24	20.0	500	10.60	34.43	26.43	161	1.904
392	26	15.73	34.65	3.86	0.34	22.5	600	7.99	34.38	26.81	125	2.058
489	26	10.89	34.43	3.21	0.82	37.5	700	5.90	34.38	27.09	98	2.179
654	45	6.58	34.36	2.29	1.48	55.0	800	4.42	34.42	27.29	80	2.276
828	45	3.98	34.42	1.59	1.98	105.0						
995	45	3.37	34.49	-	1.98	-						

SHUMPU MARU; July 22, 1955; 0408-0516 GCT; 28°55'N, 129°43'E; 1808 02 294 1821 0742 4 30-8 880-3 x 2 x x. J7

0		29.0	34.47	4.47	0.06	15.0	0	29.0	34.47	21.69	613	0.000
10	0	28.68	34.47	4.35	0.23	2.5	10	28.68	34.47	21.80	603	0.060
25	0	28.66	34.45	4.45	-	2.5	25	28.66	34.45	21.79	603	0.151
52	12	28.66	34.45	4.45	0.03	2.5	50	28.66	34.45	21.79	603	0.302
76	12	27.80	34.49	4.43	0.03	9.2	75	27.84	34.49	22.09	575	0.437
101	12	27.28	34.52	4.55	0.03	2.5	100	27.30	34.52	22.29	556	0.580
125	12	26.36	34.65	4.42	0.03	9.2	150	25.38	34.76	23.06	482	0.842
150	12	25.38	34.76	4.46	0.03	5.8	200	21.42	34.79	24.24	369	1.058
204	14	20.95	34.79	4.18	0.03	16.3	300	16.93	34.65	25.28	270	1.373
239	14	18.72	34.79	4.14	0.03	8.3	400	13.90	34.38	25.75	254	1.645
284	14	17.42	34.70	4.07	0.38	8.3	500	10.97	34.38	26.31	173	1.870
378	14	14.55	34.38	3.82	0.74	25.0	600	8.56	34.31	26.66	138	2.036
508	21	10.70	34.38	3.22	0.98	45.0	700	6.94	34.33	26.91	116	2.174
600	21	8.56	34.31	2.76	0.98	45.0						
747	21	6.18	34.33	2.17	1.48	60.0						

SHUMPU MARU; July 22, 1955; 0147-0237 GCT; 28°40'N, 129°37'E; 1110 02 289 1120 0931 4 28-0 3 600-3 x 2 x x. J8

0		28.1	34.52	4.40	0.23	12.5	0	28.1	34.52	22.03	580	0.000
10	0	27.39	34.51	4.48	0.04	3.3	10	27.39	34.51	22.25	559	0.056
25	0	26.95	34.54	4.51	0.23	3.3	25	26.95	34.54	22.42	543	0.139
50	0	25.63	34.61	4.58	0.06	5.0	50	25.63	34.61	22.88	499	0.270
75	2	24.75	34.67	4.56	0.06	5.0	75	24.75	34.67	23.19	470	0.392
100	2	23.94	34.67	4.49	0.06	5.0	100	23.94	34.67	23.43	447	0.507
125	2	22.43	34.65	4.31	0.06	8.3	150	21.71	34.79	24.16	377	0.715
150	2	21.71	34.79	4.20	0.06	8.3	200	20.35	34.79	24.53	342	0.898
200	2	20.35	34.79	4.18	0.23	9.2	300	16.87	34.69	25.32	267	1.208
234	10	19.12	34.79	4.05	0.23	6.7	400	13.73	34.52	25.90	211	1.457
282	10	17.42	34.70	4.01	0.28	16.7						
380	10	14.43	34.56	3.71	0.73	36.7						
478	10	11.48	34.42	3.43	0.98	43.3						

NMO

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
GN1	SHUMPU MARU; July 29, 1955; 0320-0334 GCT; 32°43'N, 129°48'E; 3010 02 284 3021 0000 4 11-0 5 50-3 x 4 x x.												
0		28.0	31.91	5.66		6.7		0	28.0	31.91	20.10	766	0.000
10	0	27.07	31.94	5.48		3.3		10	27.07	31.94	20.43	734	0.075
25	0	25.66	32.36	5.19		5.0		25	25.66	32.36	21.17	663	0.179
45	0	22.83	33.21	5.08		9.2							
GN2	SHUMPU MARU; July 29, 1955; 0050-0108 GCT; 32°44'N, 129°37'E; 2701 02 273 0000 2332 4 25-0 4 90-3 x 4 x x.												
0		27.6	31.91	5.35		5.0		0	27.6	31.91	20.03	772	0.000
10	0	26.56	31.91	5.40		5.0		10	26.56	31.91	20.56	721	0.074
25	0	24.62	32.32	5.43		5.0		25	24.62	32.32	21.45	636	0.176
50	0	22.69	33.50	5.74		5.0		50	22.69	33.50	22.90	497	0.318
75	0	19.24	34.29	5.17		12.5		75	19.24	34.29	24.43	351	0.425
GN3	SHUMPU MARU; July 28, 1955; 2338-2356 GCT; 32°44'N, 129°27'E; 1202 02 276 0000 2022 4 25-0 4 100-3 x 4 x x.												
0		27.4	31.83	5.24		10.8		0	27.4	31.83	20.24	752	0.000
10	0	26.71	31.83	5.31		4.2		10	26.71	31.83	20.45	732	0.074
25	0	25.17	32.36	5.58		4.2		25	25.17	32.36	21.33	648	0.177
50	0	21.70	33.80	5.54		4.2		50	21.70	33.80	23.42	448	0.315
75	0	19.15	34.18	5.27		10.8		75	19.15	34.18	24.37	357	0.416
90	0	18.23	34.49	4.86		15.0							
GN4	SHUMPU MARU; July 28, 1955; 2225-2244 GCT; 32°46'N, 129°18'E; 1603 02 271 0000 1822 4 26-0 4 130-3 x 4 x x.												
0		26.8	32.03	5.38		10.0		0	26.8	32.03	20.58	720	0.000
10	0	26.73	32.03	5.34		4.2		10	26.73	32.03	20.60	718	0.071
25	0	23.92	32.88	5.57		4.2		25	23.92	32.88	22.08	576	0.169
50	0	21.70	33.64	5.30		4.2		50	21.70	33.64	23.29	460	0.298
75	0	18.88	34.36	5.03		11.7		75	18.88	34.36	24.58	337	0.329
100	0	17.88	34.51	4.90		13.3		100	17.88	34.51	24.94	303	0.409
115	0	17.60	34.49	4.79		15.8							
GN5	SHUMPU MARU; July 28, 1955; 2115-2135 GCT; 32°47'N, 129°09'E; 0000 02 264 0000 1822 4 18-0 4 116-3 x 4 x x.												
0		26.2	32.03	5.33		10.0		0	26.2	32.03	20.77	701	0.000
10	0	26.08	32.20	5.45		4.2		10	26.08	32.20	20.93	686	0.069
25	0	23.42	32.79	5.69		4.2		25	23.42	32.79	22.15	569	0.163
50	0	21.29	34.04	5.43		4.2		50	21.29	34.04	23.71	420	0.287
75	0	18.87	34.42	4.78		12.5		75	18.87	34.42	24.62	333	0.382
100	0	17.78	34.52	5.21		15.0		100	17.78	34.52	24.98	299	0.461
GN6	SHUMPU MARU; July 28, 1955; 2022-2040 GCT; 32°48'N, 129°02'E; 1601 02 267 0000 1322 4 x 5 90-3 x 4 x x.												
0		25.5	32.36	5.42		5.8		0	25.5	32.36	21.23	657	0.000
10	0	24.32	32.54	5.60		3.3		10	24.32	32.54	21.70	612	0.063
25	0	23.90	32.65	5.54		3.3		25	23.90	32.65	21.91	592	0.153
50	0	21.02	33.77	5.17		4.2		50	21.02	33.77	23.57	433	0.282
75	0	18.76	34.40	5.11		12.5		75	18.76	34.40	24.64	331	0.378
GN7	SHUMPU MARU; July 28, 1955; 1715-1745 GCT; 32°33'N, 128°56'E; 1805 02 270 xxxx xxxx 4 x x 160-3 x 4 x x.												
0		26.4	32.21	5.40		7.5		0	26.4	32.21	20.84	695	0.000
10	0	25.92	32.54	5.46		2.5		10	25.92	32.54	21.23	657	0.067
25	0	23.49	32.79	5.44		2.5		25	23.49	32.79	22.14	570	0.159
50	0	21.56	33.55	5.18		2.5		50	21.56	33.55	23.27	462	0.289
76	20	18.60	34.34	5.00		11.7		75	18.71	34.31	24.56	339	0.389
100	20	17.69	34.43	4.83		11.7		100	17.69	34.43	24.93	304	0.470
109	20	17.61	34.47	5.02		15.0							

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ⁄°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δT_3 10^5 cm^3/g	ΔD dyn. m

SHUMPU MARU; July 28, 1955; 1540-1613 GCT; 32°28'N, 129°03'E; 1810 02 273 xxxx xxxx 4 x x 270-3 x 4 x x. GN8

0		27.0	32.54	5.24	9.2	0	27.0	32.54	20.89	690	0.000
10	0	26.89	32.54	5.20	4.2	10	26.89	32.54	20.93	686	0.068
25	0	26.83	32.85	5.54	3.3	25	26.83	32.85	21.17	663	0.170
50	0	21.64	33.89	5.66	5.8	50	21.64	33.89	23.50	440	0.308
77	18	19.25	34.51	4.69	9.2	75	19.45	34.45	24.50	345	0.406
101	18	18.12	34.52	4.79	9.2	100	18.17	34.52	24.89	308	0.489
125	18	17.08	34.51	4.68	14.2	150	15.70	34.54	25.49	250	0.631
154	22	15.48	34.54	4.65	18.3	200	14.40	34.47	25.71	230	0.754
203	22	14.33	34.47	4.47	23.3						
242	22	13.40	34.45	4.31	18.3						

SHUMPU MARU; July 28, 1955; 1420-1500 GCT; 32°24'N, 129°05'E; 1813 02 273 xxxx xxxx 1 x x 250-3 x 4 x x. GN9

0		27.2	32.50	4.97	8.3	0	27.2	32.50	20.80	698	0.000
10	0	27.15	32.56	4.89	4.2	10	27.15	32.56	20.85	694	0.069
25	0	25.73	32.43	5.30	4.2	25	25.73	32.43	21.20	660	0.171
50	0	21.12	34.05	5.68	5.0	50	21.12	34.05	23.77	414	0.305
76	15	19.24	34.38	5.13	7.5	75	19.17	34.36	24.50	345	0.401
100	15	18.37	34.49	4.65	8.3	100	18.37	34.49	24.80	316	0.484
125	15	16.58	34.54	4.61	15.0	150	15.18	34.52	25.59	241	0.623
153	20	15.01	34.52	-	20.0	200	14.30	34.51	25.76	225	0.742
201	20	14.30	34.51	4.37	20.8						
250	20	13.24	34.45	4.33	18.3						

SHUMPU MARU; July 28, 1955; 1315-1345 GCT; 32°20'N, 129°10'E; 2012 02 275 20xx 2234 1 x x 200-3 x 4 x x. GN10

0		27.5	32.14	4.88	5.0	0	27.5	32.14	20.43	734	0.000
11	10	27.45	32.18	4.88	4.2	10	27.47	32.18	20.47	730	0.073
26	10	26.36	32.47	5.08	3.3	25	26.43	32.45	21.00	679	0.178
50	10	22.75	33.73	5.42	3.3	50	22.75	33.73	23.07	481	0.324
80	20	18.88	34.40	4.77	12.5	70	19.53	34.29	24.36	358	0.429
103	20	18.06	34.56	4.42	8.3	100	18.17	34.54	24.90	307	0.513
127	20	17.06	34.56	4.48	18.0	150	15.43	34.52	25.53	247	0.655
150	20	15.43	34.52	4.43	14.2						

SHUMPU MARU; July 28, 1955; 1134-1205 GCT; 32°25'N, 129°21'E; 1815 01 270 2022 2235 4 x x 220-3 x 4 x x. GN11

0		26.2	32.11	5.00	4.2	0	26.2	32.11	20.82	697	0.000
10	4	26.16	32.11	4.96	3.3	10	26.16	32.11	20.83	696	0.069
25	4	24.37	33.19	5.23	2.5	25	24.37	33.19	22.18	566	0.164
50	4	19.91	34.22	5.06	3.3	50	19.91	34.22	24.21	372	0.282
76	10	19.08	34.45	4.33	5.8	75	19.11	34.43	24.57	338	0.371
100	10	18.16	34.54	4.27	5.8	100	18.16	34.54	24.90	307	0.452
125	10	17.07	34.52	4.47	17.5	150	16.60	34.54	25.27	271	0.597
150	10	16.60	34.54	4.45	17.5	200	15.64	34.47	25.45	254	0.731
179	10	15.68	34.47	4.48	23.8						

SHUMPU MARU; July 28, 1955; 0956-1022 GCT; 32°29'N, 129°32'E; 2017 01 274 2022 2235 4 x x 110-3 x 4 x x. GN12

0		26.7	31.92	4.87	5.0	0	26.7	31.92	20.53	724	0.000
10	15	26.65	31.94	5.21	3.3	10	26.65	31.94	20.56	721	0.072
24	15	24.09	33.31	5.14	2.5	25	23.99	33.37	22.43	542	0.167
48	15	21.73	34.49	4.49	4.2	50	21.61	34.49	23.96	396	0.284
72	15	20.28	34.47	4.38	10.8	75	20.04	34.47	24.37	357	0.379
97	15	18.27	34.40	4.38	6.7	100	18.03	34.40	24.83	313	0.463

NMO

NORPAC

OBSERVED								INTERPOLATED			COMPUTED		
Z m	W ϟ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Si µg at/L	Tot. P. µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T $10^{-5}cm^3/g$	ΔD dyn. m
GNI3	SHUMPU MARU; July 28, 1955; 0825-0840 GCT; 32°34'N, 129°42'E; 2218 03 277 2021 2224 4 16-0 5 75-3 x 4 x x.												
0		26.8	31.80	4.77		7.5		0	26.8	31.80	20.40	737	0.000
10	0	26.67	31.82	4.78		5.8		10	26.67	31.82	20.45	732	0.073
25	0	23.65	32.23	4.53		8.3		25	23.65	32.23	21.68	614	0.174
50	0	21.97	33.60	5.08		5.0		50	21.97	33.60	23.19	470	0.310
66	15	20.54	34.09	4.74		9.2							
GNA	SHUMPU MARU; July 29, 1955; 0225-0242 GCT; 32°43'N, 129°44'E; 2704 03 284 27x0 2032 4 24-0 4 80-3 x 4 x x.												
0		27.5	31.94	5.24		6.7		0	27.5	31.94	20.28	748	0.000
10	0	26.53	31.98	5.35		5.0		10	26.53	31.98	20.62	716	0.073
25	0	26.25	32.18	5.35		5.0		25	26.25	32.18	20.86	693	0.178
50	0	22.24	33.40	5.24		10.0		50	22.24	33.40	22.97	491	0.327
75	0	19.01	34.33	5.05		10.0		75	19.01	34.33	24.52	343	0.432
GNB	SHUMPU MARU; July 28, 1955; 1910-1935 GCT; 32°43'N, 128°59'E; 2003 02 263 xxxx xxxx 4 x x 120-3 x 4 x x.												
0		26.0	32.18	5.52		7.5		0	26.0	32.18	20.94	685	0.000
10	0	25.88	32.30	5.40		3.3		10	25.88	32.30	21.06	673	0.067
25	0	23.95	32.99	5.65		4.2		25	23.95	32.99	22.15	569	0.161
50	0	22.01	33.69	5.64		3.3		50	22.01	33.69	23.25	464	0.290
75	0	19.00	34.33	5.24		9.2		75	19.00	34.33	24.52	343	0.392
100	0	17.86	34.45	4.82		8.3		100	17.86	34.45	24.90	307	0.473
GNC	SHUMPU MARU; July 28, 1955; 1838-1855 GCT; 32°40'N, 128°57'E; 1605 02 260 xxxx xxxx 4 x x 116-3 x 4 x x.												
0		25.3	32.48	-		5.0		0	25.3	32.48	21.38	643	0.000
10	0	24.90	32.54	-		2.5		10	24.90	32.54	21.54	627	0.063
25	0	23.98	32.72	-		4.2		25	23.98	32.72	21.94	589	0.154
50	0	21.90	32.37	-		4.2		50	21.90	33.37	23.03	485	0.289
75	0	19.01	-	4.90		14.2		75	19.01				
90	0	18.64	-	4.96		9.2							

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
HUGH M. SMITH; July 16, 1955; 0521 GCT; 21°30'N, 158°23'W; wind, 030°, force 20 kt; weather, partly cloudy; sea, smooth; wire angle, 16°.											1
0	24.76	34.94		23.39	450.5	0	24.76	34.94	23.39	450.4	0.000
11	24.68	34.99		23.45	444.3	10	24.72	34.99	23.44	445.5	0.045
26	24.52	34.96		23.48	441.9	20	24.57	34.97	23.47	442.5	0.089
51	24.06	35.01		23.65	425.3	30	24.49	34.96	23.49	440.9	0.134
101	21.98	35.16		24.36	357.4	50	24.08	35.01	23.64	425.8	0.221
207	14.45	34.43		25.67	232.9	75	22.82	35.10	24.08	384.1	0.323
311	9.62	34.20		26.41	162.7	100	22.02	35.16	24.35	358.5	0.417
412	7.60	34.13		26.67	138.0	150	18.81	35.02	25.10	287.0	0.581
514	6.12	34.16		26.90	116.7	200	14.75	34.45	25.62	237.5	0.715
619	5.54	34.31		27.09	98.6	250	11.68	34.30	26.13	189.7	0.826
826	4.66	34.49		27.33	75.3	300	9.90	34.21	26.37	166.3	0.919
1029	3.94	34.49		27.41	68.0	400	7.82	34.14	26.64	140.3	1.078
1238	3.44	34.52		27.48	61.2	500	6.29	34.15	26.87	119.3	1.206
						600	5.62	34.28	27.05	101.8	1.332
						700	5.16	34.40	27.20	87.5	1.434
						800	4.78	34.48	27.31	77.3	1.524
						1000	4.02	34.49	27.40	68.8	1.686
HUGH M. SMITH; July 16, 1955; 2114 GCT; 23°06'N, 160°08'W; wind, 090°, force 15 kt; weather, partly cloudy; sea, moderate; wire angle, 30°.											2
0	24.00	34.74	4.87	23.46	443.0	0	24.00	34.74	23.46	443.0	0.000
25	23.97	34.72	4.89	23.46	443.5	10	23.99	34.74	23.47	442.6	0.044
52	23.70	34.70	4.95	23.52	437.3	20	23.98	34.73	23.46	443.3	0.089
58	23.28	34.70	5.05	23.65	425.5	30	23.96	34.73	23.47	442.5	0.134
115	21.81	35.30	5.10	24.52	342.7	50	23.85	34.71	23.49	440.9	0.222
200	19.38	35.12	4.65	25.03	293.8	75	22.93	34.76	23.79	411.6	0.328
291	14.46	34.42	4.57	25.66	234.1	100	22.05	35.18	24.36	357.7	0.425
391	10.27u	34.29	4.49	26.37	166.3	150	20.84	35.29	24.77	318.4	0.595
391	10.65u	34.29	-	26.30	172.7	200	19.38	35.12	25.03	293.8	0.750
488	7.84	34.07	3.81	26.59	145.8	250	17.13	34.75	25.31	267.2	0.896
585	6.80	34.18	1.75	26.82	123.6	300	14.00	34.41	25.75	225.4	1.025
778	5.26	34.31	0.83	27.12	95.3	400	10.18	34.26	26.36	167.1	1.224
971	4.50	34.47	0.83	27.33	75.2	500	7.72	34.07	26.60	144.2	1.387
1156	3.94	34.52	1.09	27.43	65.8	600	6.63	34.19	26.85	120.7	1.530
						700	5.78	34.26	27.02	105.0	1.652
						800	5.15	34.33	27.15	92.6	1.761
						1000	4.40	34.48	27.35	73.4	1.946
HUGH M. SMITH; July 17, 1955; 1131 GCT; 23°46'N, 161°41'W; wind, 090°, force 19 kt; weather, partly cloudy; sea, rough; wire angle, 21°.											4
0	23.96	35.16	4.67	23.79	411.6	0	23.96	35.16	23.79	411.6	0.000
39	23.98	35.17	4.88	23.80	411.4	10	23.96	35.16	23.79	411.5	0.041
77	23.78	35.16	-	23.85	406.3	20	23.97	35.16	23.79	411.7	0.082
98	22.51	35.23	4.97	24.27	366.4	30	23.98	35.17	23.79	411.4	0.124
147	21.30	35.32	4.90	24.67	327.9	50	23.98	35.17	23.79	411.4	0.206
216	19.60	-	4.88	-	-	75	23.84	35.16	23.83	408.1	0.309
322	15.01	34.52	4.54	25.62	237.7	100	22.48	35.24	24.28	364.8	0.406
436	10.66	34.20	-	26.23	179.3	150	21.24	35.32	24.69	326.2	0.580
641	6.17	34.07u	2.21	26.82	123.8	200	20.11	35.22	24.92	304.5	0.741
746	5.08	34.31	1.64	27.14	93.2	250	18.42	34.98	25.17	280.4	0.891
859	4.72	34.34	0.92	27.20	87.3	300	15.84	34.61	25.50	248.8	1.029
1050	4.06	34.43	0.96	27.35	73.7	400	12.01	34.28	26.05	197.0	1.262
1223	3.64	34.51	1.20	27.45	63.8	500	9.30	34.13	26.41	162.8	1.447
						600	7.09	34.07	26.70	135.4	1.605
						700	5.50	34.11	26.93	113.1	1.738
						800	4.85	34.32	27.18	90.0	1.841
						1000	4.28	34.40	27.30	78.1	2.033

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm³/g	m	°C	‰	g/L	10^{-5} cm³/g	dyn. m
5	HUGH M. SMITH; July 18, 1955; 0000, 0057 GCT; 24°32'N, 163°23'W; wind, 090°, force 18 kt; weather, partly cloudy; sea, moderate; wire angle, 10°, 15°.										
0	24.87	35.35	4.72	23.67	423.6	0	24.87	35.35	23.67	423.6	0.000
33	24.74	35.41	4.80	23.75	415.9	10	24.83	35.38	23.70	420.7	0.042
55	22.74	35.34	5.19	24.29	364.6	20	24.79	35.40	23.73	417.9	0.084
70	21.76	35.35	5.15	24.57	337.6	30	24.74	35.41	23.75	415.9	0.127
106	20.54	35.26	4.99	24.83	312.5	50	24.52	35.41	23.81	409.6	0.209
194	17.62	34.90	4.81	25.31	267.5	75	21.59	35.34	24.61	334.0	0.297
						100	20.90	35.30	24.77	318.9	0.379
338	12.56	34.36	4.78	26.00	201.2	150	19.23	35.11	25.06	290.7	0.533
457	9.44	34.13	4.20	26.39	164.9	200	17.36	34.87	25.34	263.8	0.672
572	7.31	34.11	2.48	26.70	135.5	250	15.02	34.60	25.68	232.1	0.799
684	6.14	34.23	1.37	26.95	111.5	300	13.59	34.46	25.87	213.8	0.915
906	4.36	34.36	0.81	27.26	81.8	400	10.92	34.22	26.20	182.3	1.121
1130	3.68	34.45	1.07	27.40	68.5	500	8.60	34.11	26.50	153.8	1.297
1341	3.10	34.51	1.30	27.50	58.8	600	7.00	34.12	26.75	130.4	1.445
						700	6.00	34.24	26.97	109.1	1.575
						800	5.11	34.30	27.13	94.4	1.686
						1000	4.01	34.40	27.33	75.6	1.873
7	HUGH M. SMITH; July 18, 1955; 1524 GCT; 25°20'N, 165°10'W; wind, 100°, force 13 kt; weather, rain; sea, slight; wire angle, 26°.										
0	24.95	35.26	4.76	23.57	432.8	0	24.95	35.26	23.57	432.8	0.000
23	24.97	35.25	4.82	23.56	434.3	10	24.95	35.26	23.57	432.8	0.043
51	24.12	35.37	4.97	23.90	401.1	20	24.96	35.25	23.56	433.8	0.087
64	22.78	35.34	5.15	24.28	365.6	30	24.96	35.25	23.56	433.8	0.131
116	20.26	35.26	5.03	24.91	305.3	50	24.24	35.36	23.86	405.1	0.217
190	17.28	34.92	4.99	25.40	258.3	75	22.04	35.32	24.47	347.4	0.310
283	14.00	34.49	4.78	25.81	219.5	100	20.80	35.28	24.78	317.9	0.393
380	11.75	34.34	4.85	26.14	188.0	150	18.92	35.11	25.14	283.1	0.546
474	9.75	34.13	4.46	26.34	169.8	200	17.19	34.91	25.42	256.7	0.681
572	7.26	34.09	2.95	26.69	136.0	250	15.03	34.62	25.69	230.8	0.807
766	4.98	34.20	1.16	27.07	100.3	300	13.58	34.46	25.87	213.6	0.923
959	4.14	34.38	0.98	27.30	78.3	400	11.36	34.30	26.18	184.3	1.127
1165	3.50	34.49	1.20	27.45	63.9	500	9.12	34.11	26.42	161.4	1.311
						600	6.80	34.09	26.75	130.3	1.464
						700	5.59	34.15	26.95	111.1	1.593
						800	4.80	34.22	27.10	97.0	1.706
						1000	4.00	34.40	27.33	75.3	1.897
8	HUGH M. SMITH; July 19, 1955; 0411 GCT; 26°00'N, 166°40'W; wind, 090°, force 13 kt; weather, partly cloudy; sea, slight; wire angle, 03°.										
0	25.34	35.28	4.79	23.47	442.6	0	25.34	35.28	23.47	442.6	0.000
33	25.18	35.32	4.79	23.55	435.2	10	25.30	35.30	23.50	440.1	0.044
58	23.40	35.26	5.18	24.04	388.6	20	25.21	35.31	23.53	436.8	0.088
78	22.64	35.30	5.15	24.28	364.9	30	25.18	35.32	23.55	435.0	0.132
134	21.00	35.32	4.88	24.75	320.0	50	23.81	35.27	23.92	399.4	0.216
201	19.54	35.21	4.71	25.06	291.1	75	22.76	35.30	24.25	368.0	0.312
321	15.12	34.61	4.82	25.66	233.7	100	21.92	35.32	24.50	344.1	0.402
431	11.60	34.29	4.81	26.13	189.2	150	20.69	35.31	24.83	312.6	0.567
538	9.36	34.11	4.37	26.38	165.0	200	19.58	35.22	25.06	291.3	0.721
649	6.84	34.07	3.02	26.73	132.4	250	18.10	35.02	25.28	269.9	0.865
864	4.58	34.23	1.01	27.13	94.0	300	16.08	34.74	25.55	244.4	1.000
1076	3.78	34.36	0.93	27.32	76.0	400	12.40	34.35	26.03	199.1	1.229
1294	3.18	34.51	1.23	27.50	59.4	500	10.18	34.17	26.29	173.5	1.423
						600	8.02	34.07	26.56	148.2	1.595
						700	6.19	34.10	26.84	121.8	1.738
						800	5.13	34.16	27.02	105.1	1.863
						1000	4.01	34.31	27.26	82.3	2.067

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
HUGH M. SMITH; July 19, 1955; 1555 GCT; 26°21'N, 168°14'W; wind, 100°, force 14 kt; weather, partly cloudy; sea, slight; wire angle, 09°.											10
0	25.28	35.26	4.79	23.47	442.3	0	25.28	35.26	23.47	442.3	0.000
32	25.30	35.28	4.93	23.48	441.5	10	25.28	35.26	23.47	442.2	0.044
68	24.02	35.26	5.16	23.84	406.4	20	25.29	35.27	23.48	441.7	0.088
94	23.02	35.28	5.15	24.16	376.7	30	25.30	35.28	23.48	441.5	0.134
146	21.22	35.30	4.78	24.68	327.2	50	25.30	35.28	23.48	441.5	0.222
230	18.88	35.08	4.80	25.13	284.3	75	23.72	35.26	23.94	397.6	0.329
344	15.67	34.49r	4.77	25.45	253.8	100	22.63	35.30	24.29	364.5	0.426
465	11.59	34.23	4.72	26.09	193.3	150	21.11	35.30	24.71	324.3	0.599
580	9.07	34.09	4.35	26.41	162.3	200	19.63	35.18	25.02	295.3	0.757
649	7.59	34.00	-	26.57	147.5	250	18.38	35.01	25.20	277.3	0.905
924	4.51	34.23	0.82	27.14	93.4	300	16.98	34.82	25.40	258.9	1.045
1150	3.59	34.38	1.01	27.36	72.8	400	13.83	34.44	25.81	219.8	1.295
1368	3.00	34.49	1.31	27.50	59.2	500	10.74	34.18	26.20	182.3	1.503
						600	8.68	34.07	26.46	157.8	1.683
						700	6.82	34.01	26.69	136.5	1.842
						800	5.71	34.08	26.88	117.8	1.982
						1000	4.05	34.29	27.24	84.1	2.203
HUGH M. SMITH; July 20, 1955; 0352 GCT; 26°55'N, 169°58'W; wind, 100°, force 14 kt; weather, partly cloudy; sea, slight; wire angle, 16°.											11
0	25.76	35.43	4.73	23.45	444.3	0	25.76	35.43	23.45	444.3	0.000
12	25.76	35.41	4.74	23.44	445.7	10	25.76	35.41	23.44	445.8	0.044
27	25.54	35.43	4.75	23.52	438.0	20	25.67	35.42	23.47	442.3	0.089
35	24.62	35.39	4.77	23.77	414.0	30	25.51	35.43	23.53	436.9	0.134
59	20.51a)	35.10	5.43	24.72	323.4	50	21.19	35.15	24.57	337.2	0.210
129	16.47	34.76	5.32	25.47	251.5	75	19.10	34.98	25.00	296.9	0.289
202	14.64	34.56	4.94	25.73	227.2	100	17.81	34.88	25.24	273.4	0.361
276	12.80	34.38	4.90	25.97	204.2	150	15.86	34.70	25.57	242.8	0.491
338	11.04b)	34.27	4.73	26.22	180.8	200	14.71	34.57	25.72	228.1	0.609
409	9.54c)	34.16	4.60	26.40	164.2	250	13.49	34.45	25.89	212.4	0.722
553	6.43d)	34.00	3.38	26.73	132.3	300	12.17	34.34	26.07	195.3	0.829
711	4.88	34.05	1.71	26.96	110.6	400	9.72	34.18	26.38	165.7	1.014
896	4.05	34.25	0.83	27.21	87.2	500	7.63	34.05	26.60	144.4	1.177
						600	5.81	34.00	26.81	124.9	1.318
						700	4.98	34.04	26.94	112.3	1.444
						800	4.48	34.12	27.06	101.1	1.559
						1000	(3.69)	(34.35)	(27.32)	(76.1)	(1.754)

a) Mean value of 20.45 and 20.57°C.
b) Mean value of 11.00 and 11.09°C.
c) Mean value of 9.48 and 9.60°C.
d) Mean value of 6.38 and 6.48°C.

POF1

NORPAC

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
13	HUGH M. SMITH; July 20, 1955; 1558 GCT; 27°13'N, 171°30'W; wind, 110°, force 10 kt; weather, partly cloudy; sea, smooth; wire angle, 10°.										
0	25.56	35.32	5.08a)	23.43a)	446.4	0	25.56	35.32	23.43	446.4	0.000
11	25.56	35.32	5.32	23.43	446.4	10	25.56	35.32	23.43	446.4	0.045
27	25.51	35.28	5.20	23.42	447.7	20	25.55	35.30	23.42	447.5	0.089
37	22.46	35.12	4.84	24.20	373.0	30	24.55	35.20	23.65	425.5	0.134
105	17.63	34.94	4.73	25.33	265.1	50	20.25	35.06	24.76	319.6	0.207
215	15.06	34.60	4.69	25.67	233.0	75	18.92	35.02	25.07	289.6	0.282
320	12.76	34.33	–	25.94	207.0	100	17.78	34.96	25.31	266.8	0.352
430	10.38	34.33u	–	26.38	165.2	150	16.58	34.81	25.49	250.5	0.482
536	8.42	34.07	–	26.50	154.1	200	15.40	34.65	25.63	236.5	0.605
646	6.28	34.00	3.02	26.75	130.2	250	14.30	34.52	25.77	223.3	0.724
742p	4.97	34.09	1.80	26.98	108.3	300	13.21	34.38	25.89	212.1	0.837
864	4.37	34.18	–	27.12	95.5	400	10.95	34.20	26.18	184.3	1.033
						500	9.08	34.11	26.43	160.8	1.212
						600	7.23	34.02	26.64	141.2	1.373
						700	5.52	34.04	26.87	118.6	1.511
						800	4.59	34.14	27.06	100.8	1.628
						1000	(3.86)	(34.31)	(27.27)	(80.8)	(1.832)
14	HUGH M. SMITH; July 21, 1955; 0325 GCT; 27°38'N, 173°15'W; wind, 100°, force 10 kt; weather, cloudy; sea, smooth; wire angle, 13°.										
0	25.58	35.41	4.72	23.49	440.3	0	25.58	35.41	23.49	440.3	0.000
16	25.55	35.41	4.75	23.50	439.6	10	25.57	35.41	23.50	440.0	0.044
26	23.67	35.28	5.19	23.97	394.5	20	25.30	35.39	23.56	433.6	0.088
42	20.54	35.21	5.40	24.80	316.1	30	21.83	35.23	24.46	348.0	0.128
80	19.11	35.16	5.30	25.13	284.2	50	20.09	35.21	24.92	304.6	0.193
184	18.40	35.07	5.00	25.24	273.6	75	19.15	35.17	25.13	284.2	0.267
290	16.76	34.83	5.03	25.46	252.9	100	19.01	35.15	25.15	282.6	0.338
407	12.85	34.33	4.87	25.93	208.6	150	18.59	35.10	25.22	275.8	0.479
519	10.10	34.16	4.66	26.30	173.1	200	18.23	35.04	25.26	271.5	0.618
626	7.42	34.02	–	26.61	143.7	250	17.50	34.93	25.36	262.5	0.755
837	4.90	34.09	1.59	26.99	108.0	300	16.52	34.80	25.49	249.8	0.888
1041	3.81	34.29	0.84	27.26	81.9	400	13.09	34.36	25.90	211.2	1.128
1251	3.33	34.42	1.84r	27.40	68.7	500	10.58	34.18	26.23	179.6	1.333
						600	8.08	34.05	26.54	150.5	1.507
						700	6.51	34.01	26.73	132.6	1.657
						800	5.33	34.04	26.90	116.4	1.794
						1000	3.99	34.26	27.22	85.7	2.012
16	HUGH M. SMITH; July 21, 1955; 1528, 1555 GCT; 27°57'N, 175°04'W; wind, 110°, force 15 kt; weather, cloudy; sea, smooth; wire angle, 13°, missing.										
0	25.32	34.97	4.79	23.24	464.5	0	25.32	34.97	23.24	464.5	0.000
11	25.33	34.96	4.79	23.23	465.4	10	25.33	34.96	23.23	465.4	0.047
27	22.00	34.88	5.36	24.14	378.2	20	25.33	34.97	23.24	464.6	0.093
37	20.36	34.81	5.59	24.54	340.5	30	21.48	34.86	24.28	365.7	0.137
117	16.29	34.72	5.19	25.49	250.5	50	18.52	34.77	24.98	298.1	0.203
234	14.38	34.54	4.95	25.77	223.5	75	17.59	34.76	25.21	276.8	0.275
352	12.59	34.36	4.91	26.00	201.7	100	16.62	34.74	25.42	256.4	0.342
474	9.86	–	–	–	–	150	15.80	34.68	25.56	243.0	0.467
						200	14.94	34.60	25.70	230.4	0.588
583	7.49	34.00	3.93	26.58	146.2	250	14.13	34.52	25.81	220.0	0.703
698	5.84	34.00	2.61	26.81	125.2	300	13.40	34.44	25.90	211.4	0.815
923	4.12	34.18	0.94	27.14	93.2	400	11.68	34.29	26.12	190.5	1.025
1147	3.42	34.34	0.71	27.34	74.8	500	9.30	34.10	26.38	165.0	1.210
1365	2.87	34.45	1.00	27.48	61.3	600	7.20	34.00	26.63	142.1	1.372
						700	5.85	34.00	26.80	125.3	1.515
						800	4.98	34.06	26.96	110.8	1.643
						1000	3.80	34.24	27.22	85.4	1.859

a) Order of samples in doubt.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
HUGH M. SMITH; July 24, 1955; 1612 GCT; 29°02'N, 178°40'W; wind, 160°, force 17 kt; weather, cloudy; sea, smooth; wire angle, 15°.											19
0	25.70	35.17	4.74	23.27	461.3	0	25.70	35.17	23.27	461.3	0.000
21	25.72	35.35	4.78	23.40	448.9	10	25.73	35.26	23.33	455.5	0.046
39	22.36	35.24	5.29	24.32	361.5	20	25.72	35.35	23.40	448.8	0.091
53	20.64	35.13	5.31	24.71	324.7	30	25.72	35.35	23.40	448.8	0.136
104	18.24	34.85	5.10	25.12	285.7	50	20.87	35.16	24.67	328.2	0.210
211	14.76	34.50	4.80	25.66	233.9	75	19.59	35.00	24.89	307.3	0.289
310	13.28	-	4.82	-	-	100	18.53	34.88	25.07	290.2	0.365
418	11.49	34.23	4.71	26.11	191.5	150	16.87	34.71	25.34	264.3	0.504
520	9.14	34.04	4.20	26.36	167.0	200	15.14	34.54	25.61	239.0	0.633
628	7.34	33.96	3.78	26.57	147.0	250	14.18	34.45	25.74	226.0	0.751
839	4.60	34.09	1.67	27.02	104.8	300	13.46	34.39	25.85	216.2	0.866
1045	3.74	34.20	0.76	27.28	88.1	400	11.82	34.26	26.07	195.2	1.080
1258	3.16	34.36	0.78	27.38	70.7	500	9.60	34.07	26.31	171.9	1.273
						600	7.78	33.97	26.52	152.5	1.444
						700	6.43	33.97	26.70	134.9	1.598
						800	5.09	34.03	26.92	114.4	1.734
						1000	3.88	34.19	27.18	90.0	1.953
HUGH M. SMITH; July 25, 1955; 0501, 0702, 0740 GCT; 30°06'N, 179°54'E; wind, 170°, force 11 kt; weather, partly cloudy; sea, smooth; wire angle, 00°, 00°, 00°.											20
0	26.26	35.25	4.66	23.16	472.1	0	26.26	35.25	23.16	472.1	0.000
11	26.21	35.26	4.67	23.18	469.9	10	26.22	35.26	23.18	470.2	0.047
27	25.65	35.39	4.79	23.46	443.9	20	25.94	35.36	23.34	454.7	0.094
42	22.42	35.22	5.31	24.29	364.7	30	25.64	35.39	23.46	443.6	0.138
53	21.52	35.14	5.35	24.48	346.5	50	21.78	35.16	24.42	351.9	0.217
85	19.02	34.99	5.31	25.02	294.3	75	19.75	35.04	24.88	308.5	0.299
132	17.32	34.79	5.16	25.29	268.6	100	18.20	34.90	25.16	281.0	0.373
189	16.20	34.64	4.88	25.44	254.4	150	16.95	34.74	25.34	263.9	0.511
242	15.24	34.54	4.82	25.58	241.1	200	15.76	34.59	25.50	248.7	0.642
322	13.66	34.47	4.83	25.86	214.5	250	15.09	34.53	25.61	238.6	0.767
433	11.64	34.35	4.77	26.17	185.4	300	14.04	34.48	25.79	221.1	0.887
539	9.50	34.20	4.47	26.43	160.8	400	12.29	34.39	26.08	193.8	1.101
650	7.05	34.04	3.96	26.68	137.2	500	10.31	34.26	26.34	169.4	1.292
						600	8.13	34.10	26.57	147.6	1.460
860	4.49	34.13	1.65	27.06	100.6	700	6.33	34.02	26.76	129.6	1.607
						800	5.19	34.02	26.90	116.3	1.742
1074	3.58	34.33	0.64	27.32	76.8	1000	3.81	34.26	27.24	84.1	1.957
1291	3.10	34.42	0.62	27.43	65.5						
1505	2.72	34.50	0.88	27.53	56.3						
1724	2.42	34.54	1.23	27.59	50.9						
1941	2.12	34.60	1.57	27.66	44.0						
2160	1.93	34.61	1.89	27.69	41.7						
2436	1.75	34.63	2.22	27.72	38.9						
2755	1.64	34.67	2.49	27.75	35.2						

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

22 HUGH M. SMITH; July 25, 1955; 2248 GCT; 31°49'N, 179°58'E; wind, 220°, force 14 kt; weather, partly cloudy; sea, slight; wire angle, 10°.

0	25.96	35.12	4.66	23.16	472.5	0	25.96	35.12	23.16	472.5	0.000
13	25.84	35.13	4.65	23.20	468.2	10	25.86	35.13	23.19	468.8	0.047
24	22.89	35.05	4.91	24.03	389.4	20	25.75	35.13	23.23	465.5	0.094
43	19.66	34.91	5.57	24.80	315.7	30	21.70	35.00	24.32	361.3	0.132
70	17.85	34.82	5.62	25.19	278.6	50	18.66	34.86	25.02	294.7	0.199
157	15.87	34.70	4.92	25.57	242.8	75	17.73	34.81	25.21	276.6	0.269
262	14.01	34.50	4.93	25.82	219.0	100	17.16	34.78	25.32	265.8	0.338
370	12.66	34.42	4.87	26.03	198.7	150	16.02	34.71	25.54	245.4	0.466
474	10.55	34.29	5.03	26.32	171.0	200	15.07	34.62	25.68	231.6	0.588
582	8.48	34.13	4.51	26.54	150.5	250	14.22	34.52	25.79	221.6	0.705
795	4.95	34.03	2.55	26.94	112.8	300	13.55	34.47	25.89	212.2	0.817
1028	3.76	34.25	1.05	27.24	84.3	400	12.11	34.39	26.12	190.7	1.028
1267	3.04	34.40	0.65	27.42	66.5	500	10.02	34.25	26.38	165.2	1.215
						600	8.18	34.11	26.57	147.5	1.379
						700	6.45	34.02	26.74	131.1	1.529
						800	4.88	34.04	26.95	111.4	1.662
						1000	3.85	34.24	27.22	85.9	1.876

23 HUGH M. SMITH; July 26, 1955; 1144 GCT; 33°41'N, 180°00'; wind, 240°, force 11 kt; weather, cloudy; sea, smooth; wire angle, 11°.

0	23.38	34.33	5.00	23.34	455.2	0	23.38	34.33	23.34	455.2	0.000
11	23.40	34.34	4.98	23.34	455.0	10	23.40	34.34	23.34	455.0	0.046
27	22.10	34.35	5.12	23.72	418.9	20	23.39	34.34	23.34	454.6	0.091
52	17.44	34.52	5.95	25.06	290.9	30	21.87	34.36	23.79	411.9	0.134
104	14.92	34.63	5.12	25.72	227.9	50	18.10	34.49	24.88	308.4	0.213
214	13.26	34.48	5.20	25.96	205.7	75	15.95	34.68	25.53	246.0	0.280
316	11.57	34.35	5.05	26.19	184.1	100	15.00	34.64	25.71	228.9	0.340
425	9.72	34.19	5.20	26.39	164.9	150	14.23	34.57	25.82	218.3	0.453
530	7.11	34.02	4.33	26.65	139.5	200	13.46	34.50	25.93	208.2	0.561
639	5.53	34.03	3.27	26.86	119.5	250	12.62	34.43	26.05	197.1	0.662
853	4.14	34.19	1.32	27.15	92.5	300	11.83	34.37	26.15	187.2	0.765
1065	3.37	34.14	0.64	27.19	89.1	400	10.17	34.23	26.34	169.1	0.950
1277	2.88	34.43	0.53	27.46	62.9	500	7.82	34.06	26.58	146.2	1.117
						600	6.09	34.01	26.78	127.3	1.260
						700	4.98	34.06	26.96	110.8	1.385
						800	4.40	34.15	27.09	98.2	1.500
						1000	3.58	34.30	27.29	79.0	1.694

24 HUGH M. SMITH; July 27, 1955; 0120 GCT; 35°16'N, 179°55'W; wind, 230°, force 21 kt; weather, drizzle; sea, slight; wire angle, 15°.

0	22.28	34.40	5.05	23.71	420.0	0	22.28	34.40	23.71	420.0	0.000
17	20.38	34.36	5.36	24.19	373.5	10	22.28	34.40	23.71	420.0	0.042
31	18.32	34.46	5.70	24.80	316.0	20	19.35	34.39	24.48	345.8	0.083
51	16.30	34.61	5.87	25.40	258.8	30	18.50	34.45	24.75	320.8	0.116
113	14.35	34.52	5.08	25.76	224.3	50	16.39	34.60	25.37	261.6	0.174
225	12.68	34.40	5.10	26.01	200.6	75	15.28	34.60	25.62	237.6	0.236
337	11.02	34.29	5.27	26.24	178.8	100	14.62	34.54	25.72	228.2	0.294
457	9.12	34.15	5.05	26.45	158.5	150	13.74	34.47	25.85	215.9	0.406
567	7.08	33.98	4.72	26.63	142.2	200	13.06	34.42	25.95	206.2	0.513
683	5.21	33.97	3.33	26.86	120.4	250	12.32	34.38	26.07	195.3	0.615
906	4.02	34.15	1.42	27.13	94.4	300	11.59	34.33	26.17	186.0	0.715
1130	3.36	34.34	0.78	27.35	74.0	400	10.02	34.22	26.36	167.5	0.897
1343	2.86	34.42	0.50	27.46	63.5	500	8.32	34.08	26.52	151.9	1.064
						600	6.53	33.97	26.69	136.0	1.217
						700	5.05	33.98	26.88	117.9	1.353
						800	4.49	34.06	27.01	105.9	1.473
						1000	3.68	34.25	27.24	83.6	1.680

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; July 27, 1955; 1550, 1657 GCT; 37°15'N, 179°50'W; wind, 220°, force 9 kt; weather, cloudy; sea, moderate; wire angle, 05°, 05°. 25

0	20.28	34.31	5.19	24.18	374.5	0	20.28	34.31	24.18	374.5	0.000
10	20.30	34.34	5.24	24.20	373.0	10	20.30	34.34	24.20	372.9	0.037
26	17.84	34.43	5.70	24.89	306.8	20	20.29	34.35	24.21	371.9	0.075
56	15.04	34.48	5.77	25.58	241.4	30	16.57	34.47	25.23	274.9	0.111
110	13.48	34.46	5.08	25.90	211.7	50	15.35	34.48	25.51	248.9	0.164
153	12.74	34.39	5.21	25.99	202.5	75	14.40	34.48	25.72	228.3	0.224
287	10.58	34.12r	5.36	26.18	184.1	100	13.70	34.47	25.86	215.2	0.279
						150	12.80	34.39	25.98	203.5	0.384
572	4.90	33.95	3.28	26.88	118.4	200	12.01	34.84	26.10	192.5	0.485
687	4.34	34.05	2.07	27.02	105.1	250	11.19	34.29	26.21	181.8	0.581
910	3.72	34.23	1.10	27.22	85.6	300	10.36	34.23	26.31	172.3	0.672
1133	3.14	34.33	0.68	27.36	72.8	400	8.54	34.10	26.50	153.7	0.841
						500	6.45	33.96	26.69	135.7	0.994
						600	4.67	33.97	26.92	114.7	1.123
						700	4.28	34.07	27.04	103.0	1.239
						800	4.00	34.16	27.14	93.5	1.346
						1000	3.44	34.28	27.29	79.3	1.535

HUGH M. SMITH; July 28, 1955; 0425 GCT; 38°48'N, 179°52'W; wind, 230°, force 9 kt; weather, rain showers; sea, slight; wire angle, 18°. 26

0	20.74	34.28	5.25	24.04	388.6	0	20.74	34.28	24.04	388.6	0.000
17	20.46	34.33	5.27	24.15	377.9	10	20.71	34.29	24.05	387.2	0.039
31	17.94	34.56	5.74	24.97	299.6	20	19.86	34.40	24.36	357.6	0.077
50	16.08	34.57	5.58	25.42	256.7	30	18.08	34.55	24.93	303.6	0.110
103	14.64	34.51	5.16	25.69	230.9	50	16.08	34.57	25.42	256.7	0.165
208	12.74	34.38	5.36	25.98	203.2	75	15.10	34.54	25.61	238.2	0.227
307	11.02	34.27	5.29	26.22	180.3	100	14.69	34.51	25.68	231.8	0.285
413	8.94	34.12	4.78	26.46	158.0	150	13.92	34.46	25.80	220.2	0.400
514	6.83	33.96	4.30	26.64	140.5	200	12.90	34.39	25.96	205.4	0.508
619	5.02	33.91	3.46	26.83	122.9	250	12.04	34.34	26.09	193.1	0.609
828	4.00	34.07	1.52	27.07	100.2	300	11.17	34.28	26.20	182.2	0.707
1031	3.46	34.24	0.97	27.26	82.3	400	9.21	34.14	26.43	160.6	0.884
1241	2.97	34.33	0.77	27.38	71.1	500	7.14	33.97	26.61	144.0	1.043
						600	5.40	33.91	26.79	127.0	1.185
						700	4.45	33.97	26.94	112.4	1.311
						800	4.08	34.05	27.05	102.4	1.428
						1000	3.59	34.22	27.23	85.0	1.632

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OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
28	HUGH M. SMITH; July 28, 1955; 1648, 1840 GCT; 40°19'N, 179°54'W; wind, 220°, force 21 kt; weather, cloudy; sea, moderate; wire angle, 10°, 11°.										
0	18.96	34.06	5.48	24.33	360.2	0	18.96	34.06	24.33	360.2	0.000
11	18.98	34.06	5.46	24.33	360.5	10	18.98	34.06	24.33	360.7	0.036
27	18.30	34.12	5.61	24.54	340.1	20	18.89	34.06	24.35	358.6	0.072
37	15.26	34.28	6.18	25.38	260.5	30	17.59	34.16	24.75	320.4	0.107
73	12.60	34.36	5.44	26.00	202.0	50	13.49	34.35	25.81	219.9	0.157
116	11.51	34.31	5.29	26.16	186.1	75	12.54	34.36	26.01	200.9	0.209
173	10.55	34.22	5.64	26.27	176.1	100	11.81	34.33	26.12	189.9	0.259
231	9.48	34.12	5.75	26.37	166.4	150	10.94	34.26	26.23	179.6	0.352
288	8.76	34.07	5.00	26.45	159.0	200	10.05	34.17	26.32	171.6	0.441
348	7.52	33.96	5.08	26.55	149.7	250	9.24	34.10	26.39	164.1	0.526
468	5.46	33.89	3.92	26.76	129.0	300	8.52	34.05	26.47	157.1	0.609
581	4.46	33.96	2.55	26.93	113.1	400	6.51	33.92	26.65	139.6	0.762
698	4.14	34.09	1.69	27.07	100.0	500	5.12	33.89	26.80	125.3	0.900
						600	4.39	33.97	26.95	111.6	1.025
801	3.84	34.22	1.27	27.20	87.4	700	4.13	34.10	27.08	99.2	1.140
917	3.52	34.31	0.91	27.31	77.7	800	3.88	34.21	27.19	88.3	1.246
1033	3.22	34.33	0.68	27.35	73.5	1000	3.35	34.32	27.33	75.4	1.419
1148	2.98	34.36	0.85	27.40	68.9						
1381	2.66	34.45	0.64	27.50	59.7						
1613	2.36	34.51	0.84	27.57	52.7						
1845	2.14	34.58	1.07	27.64	45.7						
2079	1.98	34.60	1.37	27.67	42.8						
2314	1.84	34.61	1.67	27.69	41.1						
29	HUGH M. SMITH; July 29, 1955; 0611 GCT; 41°50'N, 179°54'W; wind, 200°, force 24 kt; weather, fog; sea, rough; wire angle, 40°.										
0	16.55	33.95	5.68	24.83	312.5	0	16.55	33.95	24.83	312.5	0.000
17	16.36	33.97	5.82	24.89	307.0	10	16.43	33.96	24.87	309.1	0.031
28	11.72	34.02	6.71	25.90	211.0	20	16.30	33.97	24.90	305.8	0.062
38	11.24	34.04	6.50	26.00	201.2	30	11.61	34.02	25.92	209.1	0.086
89	8.47	33.89	6.35	26.35	168.1	50	10.67	34.00	26.08	194.1	0.126
175	7.98	33.93	6.18	26.46	158.0	75	9.88	34.00	26.21	181.3	0.173
264	6.70	33.86	5.42	26.58	146.2	100	8.12	33.87	26.39	164.6	0.217
359	5.65	33.88	4.36	26.73	131.9	150	8.28	33.96	26.44	160.1	0.299
449	4.78	33.88	3.62	26.83	122.4	200	7.62	33.91	26.49	154.9	0.379
541	4.28	33.97	2.62	26.96	110.8	250	6.92	33.87	26.56	148.6	0.455
724	3.88	34.16	1.28	27.15	92.2	300	6.24	33.86	26.64	140.5	0.529
908	3.40	34.25	0.87	27.27	81.1	400	5.24	33.88	26.78	127.4	0.667
1087	3.05	34.34	0.72	27.38	71.2	500	4.47	33.92	26.90	116.4	0.795
						600	4.10	34.07	27.06	101.1	0.910
						700	3.92	34.16	27.15	92.6	1.012
						800	3.65	34.21	27.22	86.3	1.108
						1000	3.20	34.30	27.33	75.5	1.285

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; July 29, 1955; 1845 GCT; 43°18'N, 179°56'W; wind, 180°, force 21 kt; weather, fog; sea, moderate; wire angle, 05°. 31

0	15.59	33.93	5.93	25.04	293.2	0	15.59	33.93	25.04	293.2	0.000
11	15.60	33.93	5.88	25.04	293.3	10	15.60	33.93	25.03	293.4	0.029
21	14.54	33.98	6.21	25.30	267.7	20	15.20	33.95	25.14	283.4	0.059
32	12.06	34.14	6.38	25.93	208.2	30	12.30	34.13	25.88	213.3	0.082
116	9.52	34.13	5.97	26.37	166.2	50	11.06	34.17	26.14	188.5	0.122
232	7.87	33.98	5.78	26.51	152.9	75	10.28	34.17	26.28	175.3	0.167
347	6.05	33.93	4.68	26.72	133.0	100	9.79	34.15	26.34	168.9	0.211
468	4.84	33.95	3.24	26.88	117.9	150	9.01	34.09	26.42	161.3	0.294
584	4.35	34.05	2.08	27.02	105.2	200	8.32	34.02	26.48	156.3	0.375
699	3.98	34.16	1.45	27.14	93.2	250	7.59	33.97	26.54	149.8	0.452
927	3.32	34.31	0.87	27.33	75.8	300	6.77	33.94	26.64	141.1	0.526
1153	2.96	34.38	0.69	27.42	67.3	400	5.49	33.94	26.80	125.7	0.663
1370	2.65	34.47	0.74	27.51	58.1	500	4.65	33.97	26.92	114.4	0.788
						600	4.25	34.07	27.04	102.7	0.901
						700	3.98	34.16	27.14	93.1	1.007
						800	3.63	34.25	27.25	83.2	1.101
						1000	3.15	34.34	27.37	72.1	1.268

HUGH M. SMITH; July 30, 1955; 0613 GCT; 44°56'N, 179°49'W; wind, 210°, force 9 kt; weather, cloudy; sea, moderate; wire angle, 17°. 32

3	13.05	33.24	6.19	25.04	292.5	0	(13.07)	(33.24)	(25.04)	(292.9)	(0.000)
15	12.52	33.30	6.30	25.19	278.2	10	12.92	33.25	25.08	289.5	0.029
28	8.88	33.44	6.97	25.94	207.5	20	11.06	33.38	25.53	246.7	0.057
42	7.90	33.48	6.99	26.12	190.6	30	8.74	33.45	25.97	204.8	0.079
108	5.97	33.49	6.90	26.39	164.8	50	7.59	33.48	26.16	186.2	0.118
211	6.16	33.75	6.09	26.57	147.9	75	7.04	33.48	26.24	179.1	0.163
313	4.90	33.89	4.13	26.83	122.9	100	6.18	33.48	26.35	168.3	0.207
420	4.22	33.95	2.75	26.96	111.6	150	5.62	33.53	26.46	157.9	0.289
521	4.02	34.07	1.80	27.07	100.4	200	5.98	33.69	26.54	150.0	0.366
628	3.80	34.20	1.30	27.19	88.5	250	6.64	33.89	26.61	143.3	0.439
839	3.38	34.29	0.82	27.30	77.9	300	5.22	33.89	26.79	126.4	0.509
1046	2.97	34.42	0.73	27.45	64.3	400	4.28	33.94	26.93	113.0	0.629
1256	2.66	34.47	0.77	27.51	58.2	500	4.08	34.03	27.03	103.9	0.742
						600	3.87	34.17	27.16	91.4	0.842
						700	3.66	34.22	27.22	85.7	0.935
						800	3.45	34.26	27.27	80.8	1.025
						1000	3.03	34.39	27.42	67.2	1.186

HUGH M. SMITH; July 30, 1955; 1753 GCT; 46°08'N, 179°55'W; wind, 300°, force 8 kt; weather, intermittent drizzle; sea, slight; wire angle, 25°. 34

0	11.26	32.99	5.74	25.19	278.8	0	11.26	32.99	25.19	278.8	0.000
24	8.18	33.26	7.06	25.90	210.8	10	10.04	33.05	25.44	254.3	0.027
42	6.58	33.30	6.95	26.16	186.7	20	8.69	33.23	25.80	220.1	0.050
57	6.26	33.30	7.04	26.20	182.8	30	7.50	33.28	26.02	199.9	0.071
99	4.81	33.39	7.17	26.44	159.6	50	6.39	33.30	26.19	184.0	0.109
207	4.42	33.66	6.28	26.70	135.3	75	5.98	33.31	26.24	178.3	0.154
310	4.01	33.82	3.74	26.87	119.2	100	4.80	33.40	26.45	158.7	0.197
420	3.96	34.00	2.42	27.02	105.0	150	4.43	33.48	26.55	149.1	0.273
522	3.86	34.09	1.62	27.10	97.3	200	4.39	33.53	26.60	144.8	0.345
626	3.64	34.22	1.15	27.22	85.6	250	4.62	33.73	26.73	132.1	0.413
832	3.30	34.31	0.85	27.33	75.6	300	4.19	33.79	26.83	123.1	0.478
1041	2.88	34.40	0.71	27.44	65.1	400	3.97	34.00	27.02	105.0	0.596
1245	2.61	34.47	0.80	27.52	57.8	500	3.93	34.04	27.05	101.8	0.702
						600	3.72	34.18	27.18	89.3	0.799
						700	3.54	34.25	27.26	82.4	0.890
						800	3.35	34.29	27.31	77.6	0.976
						1000	3.00	34.38	27.41	67.7	1.130

35

HUGH M. SMITH; July 31, 1955; 0511 GCT; 47°41'N, 179°39'W; wind, 360°, force 6 kt; weather, cloudy; sea, smooth; wire angle, 03°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	10.48	32.90	6.98	25.25	272.6	0	10.48	32.90	25.25	272.6	0.000
8	9.88	32.90	7.04	25.35	262.9	10	9.65	32.90	25.39	259.1	0.027
19	8.24	33.09	7.33	25.76	224.3	20	8.13	33.10	25.78	222.1	0.051
40	5.83	33.16	7.41	26.14	188.0	30	6.45	33.14	26.05	196.9	0.071
67	4.50	33.20	7.34	26.33	170.6	50	5.00	33.18	26.26	177.1	0.109
119	3.70	33.28	7.20	26.47	156.9	75	4.44	33.21	26.34	169.4	0.152
220	3.86	33.77	4.16	26.84	121.5	100	3.77	33.27	26.45	158.3	0.193
323	3.66	33.90	2.64	26.97	109.9	150	3.67	33.31	26.50	154.3	0.272
435	3.76	34.05	1.74	27.08	99.4	200	3.40	33.52	26.69	136.1	0.347
542	3.64	34.13	1.23	27.15	92.3	250	3.96	33.78	26.84	121.6	0.409
758	3.17	34.27	0.80	27.31	77.5	300	3.75	33.86	26.93	113.6	0.467
1029	2.80	34.40	0.77	27.45	64.5	400	3.70	33.93	26.99	107.9	0.578
1299	2.47	34.46	0.84	27.52	57.3	500	3.70	34.10	27.12	95.1	0.680
						600	3.54	34.18	27.20	87.7	0.775
						700	3.22	34.25	27.29	79.5	0.864
						800	3.05	34.35	27.38	70.4	0.949
						1000	2.93	34.39	27.43	66.3	1.095

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HUGH M. SMITH; July 31, 1955; 2005, 2200 GCT; 49°34'N, 179°58'W; wind, 200°, force 8 kt; weather, cloudy; sea, calm; wire angle, 00°, 21°.

0	9.28	32.83	7.42	25.40	258.8	0	9.28	32.83	25.40	258.8	0.000
5	8.45	32.83	7.46	25.53	246.6	10	7.99	32.83	25.60	239.9	0.025
11	7.90	32.83	7.45	25.60	239.1	20	7.62	32.83	25.65	235.1	0.048
31	7.46	32.83	7.30	25.67	232.9	30	7.46	32.83	25.67	232.9	0.072
38	6.44	32.91	6.98	25.87	214.0	50	5.35	33.03	26.10	192.2	0.114
52	5.24	33.04	6.67	26.12	190.3	75	4.20	33.27	26.41	162.3	0.159
62	4.44	33.15	6.14	26.29	173.9	100	4.02	33.35	26.49	154.7	0.200
78	4.19	33.26	5.58	26.41	163.0	150	3.92	33.47	26.60	144.6	0.277
130	3.96	33.36	5.01	26.51	153.1	200	3.88	33.48	26.61	143.7	0.351
208	3.88	33.49	4.40	26.62	142.8	250	3.88	33.65	26.75	130.8	0.422
313	3.95	33.77	2.44	26.84	122.3	300	3.92	33.74	26.82	124.2	0.488
418	3.62	33.96	1.39	27.02	105.0	400	3.68	33.91	26.97	109.2	0.608
523	3.65	34.11	0.77	27.13	94.1	500	3.64	34.10	27.13	94.6	0.714
						600	3.51	34.15	27.18	89.4	0.811
604	3.50	34.16	0.77	27.19	88.8	700	3.27	34.21	27.25	82.8	0.900
813	3.17	34.29	0.56	27.32	76.0	800	3.16	34.30	27.33	75.1	0.984
1012	2.90	34.36	0.55	27.40	68.3	1000	2.90	34.36	27.40	68.3	1.141
1217	2.60	34.42	0.79	27.48	61.4						
1431	2.34	34.48	0.83	27.55	54.3						
1641	2.14	34.52	1.06	27.60	50.2						
1855	2.02	34.56	1.59	27.64	46.1						
2077	1.90	34.58	1.28r	27.66	43.8						
2302	1.80	34.61	1.99	27.70	40.7						

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; August 1, 1955; 1148, 1235 GCT; 49°30'N, 177°19'W; wind, 060°, force 7 kt; weather, cloudy; sea, calm; wire angle, 03°, 00°. 38

0	9.53	32.69	6.92	25.25	272.9	0	9.53	32.69	25.25	272.9	0.000
32	6.50	32.92	6.98	25.87	213.9	10	8.22	32.75	25.50	249.4	0.026
66	3.88	33.13	6.31	26.33	169.9	20	7.53	32.81	25.64	235.4	0.050
119	3.44	33.40	4.59	26.59	145.4	30	6.75	32.90	25.82	218.5	0.073
219	3.62	33.86	1.88	26.94	112.2	50	4.88	33.01	26.13	188.9	0.113
323	3.38	33.96	1.41	27.04	102.8	75	3.73	33.16	26.37	166.1	0.157
433	3.36	34.06	1.00	27.12	95.0	100	3.62	33.32	26.51	153.1	0.197
541	3.34	34.18	0.80	27.22	85.9	150	3.62	33.70	26.81	124.5	0.267
651	3.16	34.25	0.66	27.30	78.8	200	3.63	33.83	26.91	114.8	0.327
870	2.88	34.34	0.54	27.39	69.7	250	3.51	33.91	26.99	107.6	0.384
1081	2.61	34.42	0.65	27.48	61.7	300	3.40	33.94	27.02	104.4	0.437
1299	2.37	34.47	0.83	27.54	55.7	400	3.37	34.03	27.10	97.3	0.540
						500	3.35	34.12	27.17	90.4	0.635
16	7.97	32.77	7.09	25.55	244.0	600	3.20	34.22	27.27	81.5	0.725
						700	3.10	34.26	27.31	77.6	0.808
						800	2.99	34.29	27.34	74.3	0.890
						1000	2.72	34.38	27.44	65.4	1.040

HUGH M. SMITH; August 1, 1955; 2322 GCT; 49°30'N, 175°04'W; wind, 200°, force 13 kt; weather, fog; sea, smooth; wire angle, 18°. 39

0	9.66	32.68	7.03	25.22	275.5	0	9.66	32.68	25.22	275.5	0.000
25	7.78	32.94	7.09	25.71	229.0	10	8.90	32.83	25.46	253.2	0.027
39	6.56	32.94	7.05	25.88	213.1	20	8.08	32.93	25.66	234.0	0.051
65	5.24	32.99	7.18	26.08	194.1	30	7.40	32.94	25.76	224.0	0.074
120	3.55	33.12	7.25	26.36	167.6	50	6.04	32.95	25.95	206.3	0.116
206	3.26	33.69	4.39	26.84	122.0	75	5.00	33.00	26.11	190.8	0.165
307	3.31	33.87	2.47	26.98	108.9	100	4.10	33.06	26.26	177.2	0.212
412	3.60	34.00	1.56	27.05	101.8	150	3.15	33.36	26.59	145.9	0.295
514	3.56	34.10	1.06	27.13	93.8	200	3.21	33.60	26.77	128.5	0.367
619	3.41	34.19	0.88	27.22	85.7	250	3.28	33.78	26.91	115.5	0.429
829	3.08	34.28	0.72	27.33	75.8	300	3.31	33.83	26.95	111.9	0.487
1033	2.82	34.35	0.82	27.40	68.5	400	3.60	33.99	27.05	102.3	0.593
1246	2.57	34.42	0.75	27.48	61.2	500	3.58	34.08	27.12	95.6	0.691
						600	3.45	34.16	27.19	88.3	0.789
						700	3.35	34.21	27.24	83.7	0.879
						800	3.19	34.25	27.29	79.2	0.967
						1000	2.85	34.34	27.39	69.5	1.124

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HUGH M. SMITH; August 2, 1955; 1146, 1322 GCT; 49°25'N, 172°35'W; wind, 240°, force 16 kt; weather, cloudy; sea, moderate; wire angle, 11°, 27°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	9.70	32.57	6.94	25.13	284.4	0	9.70	32.57	25.13	284.4	0.000
11	9.46	32.61	6.93	25.20	277.8	10	9.63	32.58	25.14	282.8	0.028
20	8.20	32.69	7.05	25.45	253.5	20	8.20	32.69	25.45	253.5	0.055
41	6.31	32.84	7.11	25.83	217.9	30	7.33	32.76	25.63	236.6	0.079
85	4.22	33.05	7.17	26.24	179.1	50	6.03	32.86	25.88	212.9	0.124
106	3.50	33.13	7.19	26.37	166.4	75	4.42	33.02	26.19	183.7	0.173
142	3.16	33.19	7.04	26.45	158.9	100	3.68	33.11	26.34	169.7	0.218
183	3.34	33.44	5.36	26.62	143.1	150	3.14	33.20	26.46	157.9	0.300
224	3.36	33.70	3.54	26.84	122.2	200	3.35	33.58	26.74	131.1	0.373
317	3.50	33.95	1.79	27.02	104.5	250	3.39	33.75	26.87	118.7	0.436
427	3.56	34.08	1.13	27.12	95.4	300	3.48	33.92	27.00	106.8	0.492
533	3.47	34.14	0.97	27.18	89.0	400	3.52	34.04	27.09	98.0	0.598
643	3.31	34.25	0.83	27.28	80.4	500	3.49	34.12	27.16	91.7	0.695
						600	3.40	34.20	27.23	84.9	0.788
793	3.10	34.31	0.61	27.35	73.8	700	3.21	34.29	27.32	76.3	0.872
890	2.96	34.33	0.65	27.38	71.0	800	3.08	34.31	27.35	73.7	0.952
989	2.84	34.36	0.65	27.41	67.8	1000	2.85	34.35	27.40	68.7	1.104
1191	2.58	34.43	0.70	27.49	60.4						
1392	2.36	34.49	0.82	27.56	54.0						
1604	2.17	34.52	1.02	27.60	50.3						
1810	2.04	34.57	1.25	27.65	45.4						
2031	1.92	34.60	1.56	27.68	42.6						
2296	1.80	34.63	1.91	27.71	39.2						

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HUGH M. SMITH; August 3, 1955; 0155 GCT; 48°03'N, 172°34'W; wind, 220°, force 21 kt; weather, fog; sea, moderate; wire angle, 32°.

0	10.86	32.86	7.18	25.16	281.8	0	10.86	32.86	25.16	281.8	0.000
17	10.83	32.85	6.92	25.16	281.9	10	10.84	32.85	25.15	282.1	0.028
25	10.24	32.88	6.88	25.28	270.1	20	10.79	32.85	25.16	281.1	0.056
35	9.69	32.97	6.80	25.44	254.6	30	9.92	32.95	25.39	259.8	0.083
50	9.20	32.95	6.73	25.50	248.8	50	9.20	32.95	25.50	248.8	0.134
76	5.70	33.13	6.71	26.13	188.8	75	5.80	33.12	26.12	190.5	0.189
190	4.20	33.53	5.87	26.62	142.9	100	4.98	33.24	26.31	172.4	0.235
340	3.86	33.91	2.41	26.96	111.0	150	4.36	33.45	26.54	150.7	0.315
432	3.83	34.04	1.63	27.06	100.8	200	4.19	33.57	26.65	139.8	0.388
587	3.65	34.19	1.00	27.20	87.7	250	4.00	33.79	26.85	121.3	0.456
784	3.24	34.26	0.74	27.30	78.8	300	3.90	33.94	26.98	109.0	0.516
984	2.89	34.34	0.67	27.39	69.8	400	3.84	34.00	27.03	103.9	0.630
1184	2.64	34.45	0.72	27.50	59.7	500	3.80	34.11	27.12	95.2	0.733
						600	3.63	34.20	27.21	86.9	0.829
						700	3.45	34.22	27.24	83.8	0.919
						800	3.21	34.26	27.30	76.8	1.006
						1000	2.85	34.37	27.42	67.2	1.164

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	$\delta_{T_3}^5$	Z	T	S	σ_t	$\delta_{T_3}^5$	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; August 3, 1955; 1436 GCT; 46°31'N, 172°34'W; wind, 290°, force 18 kt; weather, cloudy; sea, slight; wire angle, 26°. 43

0	12.72	33.03	6.40	24.94	302.0	0	12.72	33.03	24.94	302.0	0.000
13	12.48	33.03	6.42	24.99	297.6	10	12.67	33.03	24.95	301.1	0.030
26	10.03	33.13	6.79	25.51	248.2	20	11.72	33.06	25.16	281.6	0.059
42	6.04	33.33	7.06	26.25	177.9	30	7.30	33.28	26.05	197.2	0.086
59	5.63	33.33	7.01	26.30	173.0	50	5.79	33.33	26.29	174.5	0.122
162	5.25	33.73	5.67	26.66	138.8	75	5.23	33.41	26.41	162.4	0.165
202	5.12	33.77	5.37	26.71	134.3	100	5.24	33.49	26.47	156.7	0.206
305	4.50	33.82	3.86	26.82	124.1	150	5.24	33.69	26.63	141.5	0.280
372	4.15	33.90	2.78	26.92	114.6	200	5.13	33.76	26.70	135.1	0.350
447	3.92	33.96	2.07	26.99	107.8	250	5.50	33.86	26.73	131.8	0.417
595	3.80	34.16	1.25	27.16	91.6	300	4.57	33.82	26.81	124.8	0.483
740	3.46	34.24	0.90	27.26	82.3	400	4.00	33.92	26.95	111.6	0.606
900	3.11	34.31	0.85	27.35	73.9	500	3.89	34.04	27.06	101.4	0.716
						600	3.79	34.16	27.16	91.3	0.817
						700	3.59	34.22	27.23	85.1	0.910
						800	3.35	34.26	27.28	79.9	0.998
						1000	(2.82)	(34.36)	(27.41)	(67.7)	(1.158)

HUGH M. SMITH; August 4, 1955; 0457 GCT; 45°05'N, 172°30'W; wind, 260°, force 13 kt; weather, cloudy; sea, slight; wire angle, 13°. 44

0	16.23	33.19	6.85	24.33	361.0	0	16.23	33.19	24.33	361.0	0.000
11	16.04	33.21	6.94	24.38	355.4	10	16.22	33.21	24.34	359.3	0.036
20	13.94	33.22	7.00	24.85	311.4	20	13.94	33.22	24.85	311.4	0.068
31	9.23	33.44	6.11	25.88	213.0	30	9.58	33.43	25.82	219.0	0.096
62	6.64	33.37	5.94	26.20	182.2	50	7.08	33.38	26.15	187.0	0.136
114	6.51	33.48	5.91	26.31	172.4	75	6.43	33.41	26.26	176.5	0.181
227	6.60	33.82	5.88	26.56	148.0	100	6.60	33.46	26.28	174.9	0.226
339	5.02	33.87	4.04	26.80	125.8	150	6.49	33.55	26.36	166.9	0.312
458	4.34	33.98	2.52	26.96	110.4	200	6.73	33.78	26.52	152.6	0.393
685	3.80	34.18	1.15	27.18	89.9	250	6.49	33.83	26.59	145.8	0.468
908	3.28	34.31	0.75	27.33	75.4	300	5.90	33.86	26.69	136.3	0.541
1132	2.86	34.41	0.62	27.45	64.2	400	4.56	33.92	26.89	117.2	0.669
1345	2.58	34.46	0.70	27.51	58.2	500	4.22	34.01	27.00	106.8	0.784
						600	4.00	34.10	27.09	97.9	0.892
						700	3.80	34.19	27.18	89.2	0.992
						800	3.60	34.23	27.24	84.4	1.085
						1000	3.09	34.36	27.39	70.0	1.250

HUGH M. SMITH; August 4, 1955; 1712 GCT; 43°20'N, 172°19'W; wind, 320°, force 15 kt; weather, cloudy; sea, slight; wire angle, 42°. 46

0	17.60	33.60	5.83	24.32	361.8	0	17.60	33.60	24.32	361.8	0.000
8	17.54	33.61	5.86	24.34	359.8	10	17.43	33.61	24.37	357.0	0.036
23	14.20	33.67	6.30	25.14	283.3	20	15.10	33.66	24.94	302.6	0.068
48	7.60	33.59	7.25	26.25	178.2	30	10.75	33.65	25.79	221.6	0.095
70	8.88	33.93	6.68	26.32	171.1	50	7.20	33.56	26.28	175.0	0.134
106	7.70	33.80	6.58	26.40	163.9	75	8.73	33.92	26.33	169.9	0.177
174	7.15	33.82	6.43	26.49	155.1	100	7.70	33.80	26.40	163.9	0.219
224	6.92	33.87	5.79	26.56	148.6	150	7.34	33.80	26.45	159.1	0.301
295	5.65	33.87	5.23	26.73	132.7	200	6.79	33.84	26.55	148.9	0.378
441	4.67	33.96	3.15	26.91	115.5	250	6.38	33.87	26.63	141.5	0.453
594	4.13	34.11	1.74	27.09	98.4	300	5.61	33.87	26.73	132.3	0.522
754	3.64	34.21	0.94	27.22	86.2	400	4.88	33.93	26.86	119.9	0.652
937	3.26	34.34	0.83	27.35	73.2	500	4.45	34.00	26.97	109.9	0.771
						600	4.13	34.12	27.10	97.7	0.882
						700	3.80	34.16	27.16	91.5	0.982
						800	3.58	34.24	27.24	83.5	1.076
						1000	(3.06)	(34.42)	(27.44)	(65.2)	(1.241)

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HUGH M. SMITH; August 5, 1955; 0523 GCT; 41°39'N, 172°16'W; wind, 020°, force 16 kt; weather, cloudy; sea, slight; wire angle, 22°.

OBSERVED				COMPUTED	
Z	T	S	O_2	σ_t	δ_T
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g
0	21.11	34.02	5.94	23.74	416.8
10	19.60	33.96	6.37	24.09	383.0
25	16.49	34.07	6.39	24.94	302.3
38	12.40	34.21	6.08	25.92	209.3
53	11.66	34.17	5.54	26.03	198.8
97	10.52	34.20	5.35	26.26	177.2
155	9.66	34.14	5.86	26.35	167.7
257	8.13	33.98	5.94	26.47	156.6
434	5.92	33.96	4.14	26.76	129.2
649	4.43	34.05	2.00	27.01	106.0
861	3.69	34.20	0.96	27.20	87.4
1074	3.16	34.33	0.62	27.36	72.8
1277	2.81	34.38	0.55	27.43	66.2

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	21.11	34.02	23.74	416.8	0.000
10	19.60	33.96	24.09	383.0	0.041
20	18.93	33.96	24.26	366.8	0.079
30	14.21	34.18	25.53	246.5	0.109
50	11.80	34.18	26.01	200.7	0.150
75	10.86	34.20	26.20	182.8	0.198
100	10.45	34.20	26.27	176.0	0.244
150	9.74	34.15	26.35	168.2	0.331
200	8.99	34.06	26.41	163.0	0.415
250	8.19	33.98	26.47	157.3	0.497
300	7.50	33.96	26.55	149.3	0.576
400	6.29	33.95	26.71	134.3	0.722
500	5.32	33.98	26.85	120.9	0.855
600	4.67	34.02	26.96	110.6	0.976
700	4.26	34.08	27.05	102.1	1.089
800	3.89	34.16	27.15	92.3	1.194
1000	3.30	34.28	27.30	78.5	1.378

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HUGH M. SMITH; August 5, 1955; 1526, 1713 GCT; 40°23'N, 172°33'W; wind, 050°, force 16 kt; weather, cloudy; sea, slight; wire angle, 08°, 14°.

OBSERVED				COMPUTED	
Z	T	S	O_2	σ_t	δ_T
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g
0	22.20	34.13	5.82	23.52	437.5
16	22.20	34.13	6.54	23.52	437.5
27	19.41a)	34.11	6.68	24.25	367.8
33	15.54	34.25	5.73	25.29	268.8
48	13.60	34.33	5.14	25.77	223.2
65	12.93	34.36	5.15	25.93	208.2
107	11.68	34.27	5.59	26.10	191.8
160	10.90	34.21	5.53	26.20	182.8
216	10.38	34.20	5.41	26.28	174.7
325	9.02	34.09	5.41	26.42	161.3
458	6.75	33.96	4.27	26.65	139.4
569	5.34	33.95	3.16	26.83	123.2
679	4.61	34.02	2.11	26.96	110.1
767	4.19	34.13	1.61	27.10	97.4
881	3.80	34.21	1.01	27.20	87.8
1090	3.22	34.34	0.64	27.36	72.7
1309	2.79	34.37	0.51	27.42	66.7
1520	2.52	34.46	0.66	27.52	57.7
1753	2.24	34.50	0.76	27.57	52.3
1963	2.06	34.55	1.00	27.63	47.5
2196	1.92	34.57	1.37	27.66	44.6
2405	1.83	34.63	1.68	27.71	39.4

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	22.20	34.13	23.52	437.5	0.000
10	22.20	34.13	23.52	437.5	0.044
20	22.05	34.13	23.57	433.5	0.087
30	16.60	34.21	25.02	294.7	0.126
50	13.46	34.34	25.81	219.7	0.175
75	12.48	34.34	26.00	201.2	0.229
100	11.79	34.28	26.09	193.0	0.278
150	11.03	34.22	26.18	184.2	0.373
200	10.49	34.21	26.27	175.7	0.465
250	10.03	34.18	26.33	170.6	0.553
300	9.41	34.12	26.38	165.3	0.640
400	7.78	34.00	26.54	150.0	0.804
500	6.10	33.95	26.73	132.1	0.950
600	5.09	33.96	26.86	119.8	1.082
700	4.80	33.99	26.92	114.3	1.204
800	4.05	34.15	27.13	94.7	1.312
1000	3.50	34.29	27.29	79.0	1.501

a) Mean value of 19.34 and 19.48°C.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
HUGH M. SMITH; August 6, 1955; 0350 GCT; 39°02'N, 172°30'W; wind, 070°, force 18 kt; weather, intermittent drizzle; sea, slight; wire angle, 05°.											50
0	21.71	34.14	5.17	23.66	423.9	0	21.71	34.14	23.66	423.9	0.000
16	21.62	34.12	5.18	23.68	422.9	10	21.69	34.13	23.66	424.0	0.042
32	14.92	34.30	6.75	25.47	251.8	20	21.05	34.12	23.83	408.2	0.085
39	14.35	34.33	6.73	25.62	238.2	30	15.02	34.30	25.45	254.0	0.113
50	13.49	34.31	6.45	25.78	222.6	50	13.49	34.31	25.78	222.6	0.161
85	11.94	34.29	5.62	26.07	195.0	75	12.29	34.30	26.01	200.4	0.214
206	10.05	34.17	5.68	26.32	171.4	100	11.61	34.27	26.11	190.8	0.263
349	7.75	34.00	5.03	26.55	149.6	150	10.86	34.23	26.22	180.5	0.356
518	5.55	34.00	3.47	26.84	121.7	200	10.18	34.18	26.30	172.9	0.446
704	4.36	34.11	1.76	27.06	100.8	250	9.40	34.12	26.38	165.0	0.532
932	3.62	34.27	0.88	27.26	81.7	300	8.58	34.06	26.47	157.1	0.616
1161	3.06	34.39	0.60	27.42	67.3	400	7.01	33.98	26.63	141.3	0.770
1379	2.73	34.45	0.65	27.49	60.2	500	5.77	33.99	26.81	125.0	0.904
						600	4.88	34.04	26.95	111.3	1.032
						700	4.36	34.11	27.06	100.8	1.145
						800	4.00	34.18	27.16	92.0	1.249
						1000	3.48	34.30	27.30	78.0	1.435
HUGH M. SMITH; August 6, 1955; 1613 GCT; 37°23'N, 172°29'W; wind, 050°, force 18 kt; weather, drizzle; sea, rough; wire angle, 20°.											52
0	22.26	34.29	5.11	23.63	427.5	0	22.26	34.29	23.63	427.5	0.000
26	17.56	34.48	6.06	25.00	291.5	10	22.28	34.29	23.62	428.0	0.043
38	15.81	34.54	6.34	25.45	253.4	20	21.15	34.34	23.97	394.9	0.086
63	14.64	34.51	6.01	25.69	230.9	30	16.90	34.50	25.17	280.3	0.118
108	13.52	34.49	5.32	25.91	210.1	50	15.15	34.53	25.60	240.0	0.169
215	12.10	34.40	5.46	26.13	189.6	75	14.22	34.50	25.77	223.1	0.227
321	10.52	34.25	5.33	26.30	173.3	100	13.63	34.49	25.89	212.3	0.282
436	8.89	34.11	4.95	26.46	157.9	150	12.91	34.46	26.01	200.3	0.386
542	6.80	33.99	4.40	26.67	137.9	200	12.28	34.41	26.10	192.2	0.486
651	5.19	33.98	3.13	26.87	119.3	250	11.61	34.35	26.17	185.0	0.582
863	4.09	34.13	1.35	27.11	96.4	300	10.84	34.28	26.26	176.6	0.675
1074	3.40	34.31	0.84	27.32	76.5	400	9.41	34.15	26.40	163.1	0.850
1277	2.92	34.39	0.62	27.43	66.4	500	7.65	34.03	26.58	146.1	1.012
						600	5.93	33.98	26.78	127.9	1.157
						700	4.79	34.00	26.93	113.3	1.284
						800	4.34	34.07	27.03	103.6	1.402
						1000	3.65	34.25	27.25	83.4	1.605
HUGH M. SMITH; August 7, 1955; 0223 GCT; 35°55'N, 172°31'W; wind, 110°, force 11 kt; weather, partly cloudy; sea, slight; wire angle, 11°.											53
0	23.28	34.36	5.00	23.39	450.0	0	23.28	34.36	23.39	450.0	0.000
13	23.02	34.38	5.02	23.48	441.5	10	23.08	34.37	23.46	443.7	0.045
29	18.66	34.39	5.89	24.66	329.0	20	22.93	34.38	23.51	438.8	0.089
37	17.27	34.43	6.19	25.03	293.5	30	18.35	34.39	24.74	321.7	0.124
47	15.88	34.49	6.34	25.40	258.5	50	15.39	34.50	25.52	247.3	0.180
68	14.24	34.47	5.45	25.74	225.8	75	14.10	34.47	25.77	223.0	0.239
136	13.18	34.42	5.46	25.93	208.5	100	13.68	34.45	25.85	216.2	0.293
265	11.84	34.32	5.51	26.11	191.0	150	13.02	34.41	25.95	206.3	0.401
426	9.64	34.16	5.07	26.38	165.8	200	12.50	34.38	26.03	198.7	0.503
640	5.74	33.97	3.48	26.79	126.2	250	12.01	34.34	26.10	192.5	0.603
853	4.21	34.11	1.50	27.08	99.3	300	11.46	34.30	26.17	185.8	0.701
1061	3.50	34.26	0.80	27.27	81.2	400	10.07	34.19	26.33	170.5	0.885
1277	2.97	34.37	0.56	27.41	68.0	500	8.43	34.08	26.51	153.4	1.056
						600	6.48	33.99	26.71	133.8	1.208
						700	5.12	34.00	26.89	117.0	1.340
						800	4.54	34.06	27.00	106.4	1.462
						1000	3.69	34.22	27.22	85.9	1.670

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NORPAC

55

HUGH M. SMITH; August 7, 1955; 1428 GCT; 34°20'N, 172°35'W; wind, 130°, force 12 kt; weather, partly cloudy; sea, slight; wire angle, 32°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	23.84	34.58	4.93	23.39	450.0	0	23.84	34.58	23.39	450.0	0.000
12	23.86	34.57	4.91	23.38	451.2	10	23.85	34.57	23.38	451.0	0.045
25	19.84	34.49	5.77	24.44	350.6	20	23.65	34.56	23.43	446.0	0.090
56	15.48	34.52	6.34	25.52	247.6	30	18.65	34.50	24.74	320.9	0.125
97	14.00	34.49	5.34	25.81	219.7	50	15.80	34.52	25.44	254.6	0.181
190	12.73	34.43	5.32	26.02	199.3	75	14.66	34.51	25.69	231.3	0.241
288	11.53	34.32	5.00	26.17	185.8	100	13.92	34.49	25.83	218.0	0.297
388	10.00	34.23	5.02	26.37	166.3	150	13.19	34.46	25.95	205.8	0.405
484	8.08	34.11	4.54	26.59	146.0	200	12.61	34.42	26.04	197.7	0.507
582	6.37	34.00	3.74	26.74	131.5	250	12.02	34.37	26.12	190.4	0.606
775	4.52	34.09	1.83	27.03	104.0	300	11.36	34.31	26.19	183.3	0.702
976	3.68	34.27	0.76	27.26	82.0	400	9.78	34.22	26.40	163.6	0.882
1178	3.17	34.35	0.40	27.37	71.5	500	7.79	34.09	26.61	143.5	1.042
						600	6.10	34.00	26.77	128.2	1.186
						700	5.02	34.03	26.93	113.5	1.315
						800	4.36	34.12	27.07	100.0	1.432
						1000	3.60	34.29	27.28	79.8	1.626

56

HUGH M. SMITH; August 8, 1955; 0121 GCT; 32°36'N, 172°27'W; wind, 230°, force 14 kt; weather, rain; sea, slight; wire angle, 16°.

0	24.46	34.87	4.87	23.43	446.6	0	24.46	34.87	23.43	446.6	0.000
16	24.49	34.88	4.86	23.43	446.8	10	24.47	34.88	23.43	446.2	0.045
33	18.97	34.60	5.94	24.74	321.5	20	24.47	34.88	23.43	446.2	0.089
40	17.80	34.61	6.11	25.04	292.9	30	19.52	34.62	24.62	333.3	0.127
56	16.33	34.61	6.07	25.39	259.6	50	16.70	34.61	25.30	267.7	0.186
92	15.20	34.58	5.13	25.62	237.3	75	15.62	34.60	25.54	244.8	0.250
209	13.32	34.43	5.05	25.90	210.6	100	15.02	34.57	25.66	234.3	0.309
310	11.88	34.33	5.08	26.11	190.9	150	14.21	34.50	25.77	222.9	0.426
468	9.18	34.12	4.77	26.42	161.6	200	13.43	34.44	25.89	212.0	0.535
625	6.30	33.97	3.54	26.72	133.1	250	12.72	34.39	26.00	202.0	0.642
834	4.28	34.09	1.53	27.06	101.4	300	12.04	34.34	26.09	193.0	0.745
1039	3.54	34.25	0.58	27.26	82.4	400	10.38	34.22	26.30	173.3	0.934
1225	3.10	34.36	0.40	27.39	70.1	500	8.56	34.08	26.49	155.3	1.106
						600	6.72	33.98	26.67	137.6	1.261
						700	5.47	33.99	26.84	121.8	1.398
						800	4.50	34.07	27.02	105.2	1.521
						1000	3.63	34.22	27.22	85.4	1.726

58

HUGH M. SMITH; August 8, 1955; 1213 GCT; 31°22'N, 172°25'W; wind, 140°, force 18 kt; weather, showers; sea, moderate; wire angle, 28°.

0	24.94	35.25	4.80	23.57	433.2	0	24.94	35.25	23.57	433.2	0.000
24	24.88	35.21	4.85	23.56	434.2	10	24.91	35.23	23.56	433.7	0.043
37	21.27	35.05	5.45	24.48	346.5	20	24.89	35.22	23.56	433.8	0.087
53	19.70	34.96	5.52	24.83	313.0	30	22.80	35.12	24.10	382.0	0.130
103	16.58	34.71	5.42	25.41	257.7	50	20.24	34.99	24.71	324.4	0.199
206	14.50	34.52	5.11	25.73	227.4	75	17.84	34.82	25.19	278.3	0.273
307	12.91	34.39	5.05	25.96	205.6	100	16.63	34.72	25.40	258.1	0.341
417	11.24	34.31	4.93	26.21	181.4	150	15.41	34.61	25.60	239.6	0.466
519	8.96	34.13	4.60	26.46	157.5	200	14.61	34.53	25.71	228.9	0.585
589	6.98a)	34.03	3.93	26.68	137.1	250	13.82	34.46	25.83	218.2	0.700
775	4.69	34.04	2.28	26.97	109.3	300	13.00	34.40	25.95	206.6	0.810
953	3.88	34.19	1.02	27.18	90.0	400	11.52	34.32	26.17	185.4	1.014
						500	9.41	34.17	26.42	161.6	1.195
						600	6.80	34.03	26.70	134.7	1.353
						700	5.45	34.01	26.86	120.0	1.489
						800	4.53	34.06	27.00	106.2	1.613
						1000	(3.83)	(34.22)	(27.21)	(87.2)	(1.824)

a) Mean value of 6.93 and 7.04°C.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	$10^5 cm^3/g$	m	°C	‰	g/L	$10^5 cm^3/g$	dyn. m

59

HUGH M. SMITH; August 8-9, 1955; 2309, 2337, 0112 GCT; 30°14'N, 172°43'W; wind, 170°, force 16 kt; weather, partly cloudy; sea, moderate; wire angle, 19°, missing, 07°.

0	25.16	35.02	4.78	23.33	456.2	0	25.16	35.02	23.33	456.2	0.000
15	25.14	35.05	4.75	23.36	453.4	10	25.15	35.04	23.35	454.3	0.045
36	21.86	35.08	5.41	24.34	359.8	20	25.40	35.17	23.37	452.3	0.091
46	21.30	35.04	5.48	24.46	348.1	30	24.10	35.18	23.77	414.1	0.136
66	19.70	35.07	5.43	24.91	305.0	50	21.08	35.04	24.52	342.3	0.207
81	18.32	34.88	5.49	25.12	285.5	75	18.57	34.91	25.08	289.2	0.286
136	16.95	34.79	5.08	25.38	260.2	100	17.66	34.84	25.25	272.7	0.357
212	15.24	34.57	4.92	25.61	239.0	150	16.66	34.76	25.43	255.8	0.489
						200	15.48	34.60	25.58	241.6	0.616
289	13.64	34.42	4.87	25.83	217.7	250	14.42	34.49	25.72	227.8	0.737
360	12.50	34.36	4.93	26.01	200.2	300	13.45	34.41	25.86	214.6	0.852
452	10.73	34.23	4.72	26.24	178.4	400	11.79	34.31	26.11	190.8	1.062
563	8.64	34.13	4.31	26.51	152.9	500	9.84	34.19	26.37	166.8	1.249
675	6.67	34.01	-	26.71	134.5	600	8.02	34.09	26.58	146.6	1.414
						700	6.23	34.01	26.76	129.1	1.564
800	4.91	34.08	1.80	26.98	108.8	800	4.91	34.08	26.98	108.8	1.695
909	4.17	34.17	0.96	27.13	94.3	1000	3.80	34.24	27.22	85.5	1.906
1024	3.78	34.25	0.59	27.23	84.5						
1139	3.40	34.34	0.46	27.34	74.3						
1371	2.89	34.43	0.73	27.46	62.9						
1598	2.46	34.51	0.82	27.56	53.5						

61

HUGH M. SMITH; August 9, 1955; 1440 GCT; 29°57'N, 170°40'W; wind, 080°, force 16 kt; weather, cloudy; sea, moderate; wire angle, 14°.

0	25.09	35.22	4.80	23.50	439.7	0	25.09	35.22	23.50	439.7	0.000
24	25.10	35.24	4.77	23.51	438.5	10	25.10	35.23	23.50	439.3	0.044
42	21.30	35.03	5.62	24.45	348.9	20	25.10	35.24	23.51	438.5	0.088
64	18.50	34.86	5.87	25.06	291.0	30	25.00	35.24	23.54	435.8	0.132
114	15.69	34.63	5.33	25.55	244.2	50	20.02	35.06	24.82	313.9	0.204
227	13.51	34.43	4.92	25.86	214.4	75	17.40	34.81	25.29	269.0	0.278
340	11.59	34.31	4.90	26.15	187.3	100	16.08	34.68	25.51	248.6	0.343
460	9.70	34.18	4.74	26.38	165.4	150	14.92	34.54	25.65	234.4	0.465
573	7.42	34.04	3.83	26.62	142.3	200	13.97	34.45	25.79	221.8	0.581
689	5.50	34.04	2.40	26.87	118.7	250	13.11	34.41	25.93	208.0	0.691
913	3.95	34.20	0.80	27.18	89.8	300	12.23	34.35	26.06	195.7	0.796
1138	3.26	34.38	0.52	27.39	70.0	400	10.64	34.25	26.28	175.3	0.988
1354	2.83	34.48	0.65	27.51	58.8	500	8.99	34.14	26.47	157.1	1.163
						600	7.05	34.02	26.66	138.6	1.319
						700	5.40	34.05	26.90	116.5	1.455
						800	4.53	34.12	27.05	101.7	1.573
						1000	3.67	34.25	27.25	83.5	1.776

62

HUGH M. SMITH; August 10, 1955; 0524 GCT; 29°53'N, 168°50'W; wind, 090°, force 13 kt; weather, partly cloudy; sea, moderate; wire angle, 04°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	24.96	35.12	4.82	23.46	443.2	0	24.96	35.12	23.46	443.2	0.000
16	24.48	35.16	4.88	23.64	426.3	10	24.94	35.13	23.47	442.3	0.044
32	20.41	35.07	5.61	24.72	323.0	20	22.90	35.10	24.06	386.2	0.088
53	19.06	35.03	5.58	25.05	292.2	30	20.52	35.07	24.69	325.8	0.122
116	16.98	34.88	5.28	25.44	254.4	50	19.17	35.03	25.02	294.8	0.183
233	14.83	34.54	5.11	25.67	232.6	75	18.15	34.97	25.23	274.7	0.255
348	12.40	34.34	4.98	26.02	199.8	100	17.37	34.91	25.37	261.0	0.322
470	10.33	34.19	4.90	26.28	174.8	150	16.32	34.79	25.53	246.1	0.450
585	7.96	34.07	4.14	26.57	147.3	200	15.43	34.63	25.61	238.6	0.573
702	6.08	34.00	3.31	26.78	127.8	250	14.52	34.51	25.72	228.5	0.693
930	3.98	34.22	0.70	27.19	88.6	300	13.42	34.42	25.88	213.2	0.807
1158	3.40	34.39	0.61	27.38	70.6	400	11.58	34.28	26.13	189.6	1.015
1376	3.32	34.47	0.69	27.45	63.8	500	9.78	34.16	26.35	168.0	1.203
						600	7.62	34.06	26.61	143.6	1.368
						700	6.10	34.00	26.77	128.3	1.514
						800	5.01	34.04	26.94	112.8	1.644
						1000	3.68	34.29	27.28	80.5	1.856

64

HUGH M. SMITH; August 10, 1955; 2001 GCT; 29°50'N, 166°45'W; wind, 100°, force 16 kt; weather, partly cloudy; sea, moderate; wire angle, 30°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	25.28	35.45	4.72	23.62	428.5	0	25.28	35.45	23.62	428.5	0.000
28	25.36	35.48	4.76	23.61	429.0	10	25.33	35.47	23.61	428.8	0.043
41	22.62	35.34	5.33	24.32	361.5	20	25.36	35.47	23.61	429.6	0.086
57	21.40	35.29	5.35	24.62	332.7	30	25.37	35.48	23.61	429.1	0.129
93	19.14	35.12	5.26	25.09	287.8	50	21.90	35.32	24.51	343.5	0.204
179	16.34	34.77	4.87	25.51	248.2	75	20.06	35.21	24.92	304.0	0.285
268	13.96	34.47	4.73	25.80	220.2	100	18.88	35.10	25.14	283.0	0.360
361	11.93	34.30	4.77	26.08	194.1	150	17.20	34.89	25.40	258.6	0.496
450	10.16	34.14u	4.35	26.27	175.6	200	16.73	34.83	25.47	252.3	0.622
545	8.52	34.11	3.88	26.52	152.6	250	14.45	34.52	25.74	226.3	0.743
729	5.64	34.05	2.13	26.87	119.2	300	13.22	34.40	25.90	210.7	0.856
910	4.23	34.20	0.90	27.15	92.7	400	11.15	34.22	26.16	186.3	1.061
1098	3.63	34.34	0.59	27.32	76.4	500	9.27	34.12	26.41	163.0	1.246
						600	7.63	34.07	26.62	143.0	1.406
						700	6.08	34.03	26.80	125.7	1.551
						800	4.97	34.10	26.99	107.7	1.678
						1000	3.99	34.26	27.32	76.4	1.890

65

HUGH M. SMITH; August 11, 1955; 1027 GCT; 29°59'N, 164°49'W; wind, 110°, force 13 kt; weather, partly cloudy; sea, slight; wire angle, 20°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	24.61	35.15	4.81	23.59	430.9	0	24.61	35.15	23.59	430.9	0.000
27	24.62	35.16	4.83	23.60	430.5	10	24.61	35.15	23.59	430.9	0.043
35	24.49	35.17	4.87	23.64	425.8	20	24.62	35.16	23.60	430.5	0.086
83	17.22	34.76	5.67	25.30	268.6	30	24.61	35.16	23.60	430.1	0.129
147	14.86	34.53	5.03	25.66	233.9	50	19.68	34.93	24.81	314.6	0.204
236	12.88	34.35	4.92	25.93	207.9	75	17.52	34.78	25.24	273.9	0.276
354	11.02	34.26	4.54	26.22	181.0	100	16.58	34.70	25.40	258.4	0.344
467	9.09	34.14	4.53	26.45	158.7	150	14.77	34.52	25.67	232.8	0.467
587	6.77	34.02	3.53	26.70	135.0	200	13.62	34.42	25.83	217.3	0.581
742	4.84	34.07	1.88	26.98	108.8	250	12.63	34.34	25.97	204.1	0.690
992	3.84	34.28	0.50	27.25	82.9	300	11.88	34.30	26.09	193.2	0.793
1246	3.17	34.45	0.60	27.45	63.8	400	10.27	34.22	26.32	171.5	0.982
1552	2.64	34.55	1.23	27.58	52.0	500	8.48	34.11	26.52	152.1	1.152
						600	6.53	34.02	26.73	132.1	1.302
						700	5.22	34.05	26.92	114.5	1.434
						800	4.60	34.10	27.03	104.0	1.552
						1000	3.87	34.23	27.21	86.8	1.762

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; August 11, 1955; 2225 GCT; 31°36'N, 164°41'W; wind, 090°, force 13 kt; weather, partly cloudy; sea, slight; wire angle, 03°. 66

0	24.68	35.36	4.84	23.73	417.7	0	24.68	35.36	23.73	417.7	0.000
32	24.60	35.39	4.77	23.78	413.3	10	24.67	35.38	23.75	416.0	0.042
46	22.44	35.07	5.17	24.17	376.0	20	24.62	35.39	23.77	413.8	0.083
55	19.05	34.69	5.78	24.79	316.7	30	24.60	35.39	23.78	413.3	0.124
109	15.26	34.56	5.59	25.60	239.9	50	20.30	34.80	24.55	339.6	0.205
217	13.18	34.42	5.23	25.93	208.6	75	16.82	34.61	25.28	270.4	0.279
323	11.46	34.31	4.93	26.17	185.2	100	15.55	34.58	25.54	244.8	0.344
434	9.84	34.18	4.98	26.36	167.7	150	14.38	34.51	25.75	225.7	0.463
540	7.84	34.05	4.17	26.57	147.3	200	13.44	34.44	25.89	212.2	0.574
651	6.02	34.02	3.10	26.80	125.8	250	12.62	34.38	26.01	200.9	0.680
869	4.22	34.14	1.17	27.10	97.2	300	11.84	34.34	26.13	189.6	0.782
1081	3.42	34.30	0.45	27.31	77.6	400	10.37	34.23	26.31	172.4	0.963
1299	3.04	34.44	0.47	27.46	63.6	500	8.62	34.09	26.48	155.6	1.141
						600	6.80	34.02	26.70	135.4	1.295
						700	5.57	34.03	26.86	119.8	1.431
						800	4.72	34.07	26.99	107.6	1.554
						1000	3.71	34.22	27.22	86.2	1.764

HUGH M. SMITH; August 12, 1955; 1056, 1120 GCT; 32°57'N, 164°58'W; wind, 110°, force 17 kt; weather, cloudy; sea, slight; wire angle, 00°, 00°. 67

0	24.36	34.86	4.85	23.45	444.5	0	24.36	34.86	23.45	444.5	0.000
27	23.14	34.76	5.17	23.73	417.3	10	24.35	34.85	23.44	445.0	0.044
36	19.94	34.60	5.79	24.49	345.1	20	24.30	34.85	23.46	443.4	0.089
85	14.96	34.57	5.58	25.67	233.1	30	21.80	34.67	24.04	387.8	0.132
						50	17.12	34.60	25.20	277.9	0.196
142	13.98	34.49	5.32	25.81	219.3	75	15.27	34.58	25.61	238.8	0.260
233	12.55	34.39	5.40	26.03	198.8	100	14.67	34.55	25.72	228.7	0.318
349	11.08	34.28	5.09	26.22	180.7	150	13.82	34.48	25.84	216.7	0.431
471	9.04	34.16	4.90	26.47	156.6	200	13.08	34.43	25.96	205.9	0.538
587	6.74	34.01	4.04	26.70	135.4	250	12.33	34.37	26.06	196.2	0.641
704	5.08	34.01	2.52	26.91	115.7	300	11.73	34.33	26.14	188.5	0.740
932	3.82	34.22	0.74	27.21	87.2	400	10.35	34.23	26.31	172.1	0.928
1161	3.18	34.35	0.36	27.37	71.5	500	8.44	34.13	26.54	150.0	1.097
1379	2.86	34.50	0.50	27.52	57.5	600	6.52	33.99	26.70	134.3	1.246
						700	5.18	34.01	26.89	116.9	1.380
						800	4.46	34.08	27.03	104.1	1.500
						1000	3.62	34.25	27.25	83.2	1.704

HUGH M. SMITH; August 12, 1955; 2217 GCT; 34°42'N, 164°40'W; wind, 130°, force 11 kt; weather, partly cloudy; sea, slight; wire angle, 18°. 68

0	24.40	34.82	4.86	23.41	448.6	0	24.40	34.82	23.41	448.6	0.000
21	21.54	34.74	5.58	24.17	376.0	10	24.32	34.81	23.43	446.8	0.045
36	17.43	34.69	6.17	25.19	278.6	20	21.90	34.75	24.08	384.7	0.089
62	15.60	34.60	6.04	25.55	244.4	30	18.62	34.71	24.91	304.8	0.123
102	14.10	34.51	5.26	25.81	220.1	50	16.20	34.64	25.44	254.4	0.177
204	12.64	34.39	5.35	26.01	200.5	75	14.92	34.57	25.68	232.2	0.237
303	11.46	34.34	5.26	26.20	182.9	100	14.12	34.51	25.80	220.5	0.295
407	9.78	34.19	5.00	26.38	165.7	150	13.40	34.45	25.90	210.7	0.404
507	8.02	34.04	4.73	26.54	150.4	200	12.72	34.40	26.00	201.3	0.508
613	6.33	33.97	3.73	26.72	133.5	250	12.13	34.37	26.10	192.5	0.610
819	4.42	34.09	1.54	27.04	102.9	300	11.52	34.34	26.18	184.0	0.707
1023	3.60	34.26	0.47	27.26	82.2	400	9.85	34.20	26.37	166.2	0.889
1237	3.12	34.40	0.29	27.42	67.2	500	8.16	34.05	26.53	151.7	1.055
						600	6.53	33.97	26.69	136.0	1.206
						700	5.38	33.99	26.85	120.6	1.342
						800	4.60	34.05	26.99	107.8	1.466
						1000	3.68	34.19	27.20	88.1	1.676

69

HUGH M. SMITH; August 13, 1955; 0947 GCT; 36°05'N, 164°48'W; wind, 150°, force 16 kt; weather, intermittent drizzle; sea, slight; wire angle, 18°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	23.84	34.57	4.95	23.38	450.7	0	23.84	34.57	23.38	450.7	0.000
15	23.86	34.57	4.97	23.38	451.1	10	23.85	34.57	23.38	451.0	0.045
25	23.44	34.52	4.97	23.46	443.0	20	23.75	34.56	23.40	448.9	0.090
34	19.10	34.34	5.89	24.51	343.3	30	23.20	34.50	23.52	437.8	0.134
65	14.70	34.36	6.47	25.56	243.1	50	16.25	34.35	25.21	276.6	0.199
126	12.99	34.43	5.33	25.97	204.1	75	14.27	34.37	25.66	233.5	0.262
207	11.95	34.40	5.32	26.15	187.0	100	13.49	34.41	25.85	215.4	0.318
308	10.51	34.23	5.13	26.28	174.7	150	12.63	34.43	26.04	197.4	0.422
465	7.98	34.07	4.54	26.57	147.5	200	12.03	34.41	26.14	188.0	0.519
623	5.48	34.03	3.18	26.87	118.8	250	11.32	34.33	26.21	181.3	0.614
832	4.12	34.17	1.18	27.14	93.8	300	10.62	34.25	26.28	175.1	0.706
1037	3.40	34.31	0.51	27.32	76.6	400	9.08	34.13	26.44	159.4	0.880
1250	2.96	34.39	0.32	27.42	66.6	500	7.40	34.06	26.64	140.5	1.037
						600	5.85	34.03	26.83	123.1	1.176
						700	4.80	34.08	26.99	107.6	1.298
						800	4.25	34.14	27.10	97.4	1.410
						1000	3.57	34.27	27.27	81.1	1.603

70

HUGH M. SMITH; August 13, 1955; 2025 GCT; 37°30'N, 164°48'W; wind, 190°, force 18 kt; weather, cloudy; sea, moderate; wire angle, 15°.

0	23.08	34.23	5.06	23.35	454.0	0	23.08	34.23	23.35	454.0	0.000
13	22.82	34.19	5.08	23.39	449.8	10	23.03	34.22	23.36	453.2	0.045
23	19.27	34.16	6.08	24.33	360.3	20	22.12	34.18	23.58	431.9	0.089
42	14.85	34.33	7.06	25.51	248.3	30	16.72	34.33	25.09	288.7	0.122
61	13.14	34.27	6.22	25.82	218.8	50	14.08	34.30	25.65	235.1	0.173
112	11.88	34.26	5.64	26.06	196.1	75	12.61	34.27	25.92	208.8	0.228
225	10.30	34.14	5.82	26.25	178.0	100	12.02	34.27	26.04	197.9	0.280
336	9.56	34.14	5.28	26.37	166.1	150	11.37	34.23	26.13	189.5	0.378
453	7.76	34.02	4.68	26.56	148.5	200	10.67	34.17	26.21	181.8	0.473
677	5.00	33.97	2.50	26.88	118.0	250	10.10	34.13	26.28	175.3	0.564
897	3.87	34.17	1.00	27.16	91.4	300	9.77	34.14	26.34	169.4	0.652
1120	3.22	34.33	0.50	27.35	73.5	400	8.59	34.06	26.47	157.1	0.822
1334	2.82	34.42	0.41	27.46	63.2	500	7.14	34.00	26.64	141.2	0.977
						600	5.87	33.97	26.78	127.9	1.118
						700	4.86	33.98	26.90	115.8	1.246
						800	4.34	34.04	27.01	105.8	1.367
						1000	3.60	34.24	27.24	83.7	1.569

71

HUGH M. SMITH; August 14, 1955; 0648 GCT; 38°59'N, 164°50'W; wind, 130°, force 21 kt; weather, cloudy; sea, moderate; wire angle, 25°.

0	23.22	34.29	5.01	23.36	453.6	0	23.22	34.29	23.36	453.6	0.000
10	23.22	34.28	5.02	23.35	454.4	10	23.22	34.28	23.35	454.4	0.045
24	18.68	34.28	6.37	25.57	337.3	20	21.02	34.18	23.88	403.0	0.091
57	13.48	34.35	6.07	25.81	219.7	30	16.25	34.34	25.20	277.4	0.122
129	11.75	34.32	5.49	26.13	189.5	50	14.02	34.35	25.70	230.3	0.174
212	10.76	34.25	5.54	26.25	177.5	75	12.67	34.35	25.97	204.0	0.227
317	9.17	34.07	5.62	26.38	165.1	100	12.20	34.34	26.06	195.9	0.278
429	7.81	34.04	4.77	26.57	147.6	150	11.44	34.30	26.17	185.5	0.374
535	6.04	33.95	3.89	26.74	131.3	200	10.88	34.26	26.24	178.6	0.467
641	4.87	34.00	2.55	26.92	114.1	250	10.18	34.19	26.31	172.3	0.557
849	3.99	34.16	1.15	27.14	93.2	300	9.39	34.09	26.36	167.1	0.643
1058	3.39	34.28	0.64	27.30	77.8	400	8.18	34.05	26.52	152.0	0.809
1257	2.92	34.37	0.45	27.41	67.8	500	6.67	33.98	26.68	136.8	0.960
						600	5.30	33.96	26.84	122.0	1.096
						700	4.54	34.04	26.99	108.0	1.217
						800	4.12	34.12	27.10	97.6	1.329
						1000	3.47	34.25	27.26	81.7	1.523

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T $10^5 cm^3/g$	Z m	T °C	S ‰	σ_t g/L	δ_T $10^5 cm^3/g$	ΔD dyn. m

HUGH M. SMITH, August 14, 1955; 1852 GCT; 40°28'N, 165°00'W; wind 150°, force 18 kt; weather, cloudy; sea, moderate; wire angle 7°. 73

0	22.09	34.05	5.20	23.49	440.2	0	22.09	34.05	23.49	440.2	0.000
14	21.17	34.04	5.58	23.74	417.0	10	22.09	34.05	23.49	440.2	0.044
31	13.29	34.17	6.85	25.71	228.9	20	16.80	34.12	24.90	305.7	0.083
55	11.48	34.14	6.04	26.04	198.0	30	13.35	34.17	25.70	230.3	0.108
110	10.26	34.12	5.96	26.24	178.8	50	11.67	34.15	26.01	200.5	0.150
231	8.70	34.02	5.89	26.42	161.9	75	10.96	34.14	26.13	189.0	0.199
345	7.28	33.97	4.95	26.59	145.5	100	10.41	34.13	26.22	180.6	0.246
467	5.66	33.96	3.51	26.80	126.1	150	9.66	34.09	26.32	171.5	0.335
697	4.18	34.13	1.58	27.10	97.4	200	9.06	34.04	26.38	165.7	0.420
925	3.46	34.26	0.77	27.27	80.8	250	8.47	34.01	26.45	159.2	0.503
1150	2.96	34.36	0.59	27.40	68.8	300	7.88	33.99	26.52	152.2	0.583
1367	2.62	34.43	0.58	27.48	60.8	400	6.55	33.96	26.68	136.9	0.732
1631	2.34	34.49	0.66	27.56	54.1	500	5.37	33.96	26.83	122.8	0.866
						600	4.72	34.01	26.94	112.0	0.990
						700	4.13	34.13	27.10	97.0	1.100
						800	3.80	34.18	27.18	90.0	1.201
						1000	3.28	34.28	27.31	77.7	1.383

HUGH M. SMITH, August 15, 1955; 0526 GCT; 42°03'N, 164°52'W; wind 160°, force 15 kt; weather, partly cloudy; sea, slight; wire angle 25°. 74

0	21.80	33.95	5.27	23.50	440.0	0	21.80	33.95	23.50	440.0	0.000
9	21.22	33.97	5.30	23.67	423.3	10	20.88	33.97	23.76	414.5	0.044
18	17.74	33.93	6.73	24.54	340.9	20	17.12	33.93	24.68	326.9	0.081
53	10.45	33.89	6.49	26.03	198.8	30	15.04	33.91	25.14	283.1	0.111
129	9.02	33.96	6.20	26.32	171.1	50	10.59	33.89	26.01	201.1	0.157
212	8.71	34.00	5.92	26.40	163.5	75	9.98	33.90	26.12	190.6	0.205
318	7.56	34.01	5.09	26.58	146.4	100	9.48	33.92	26.22	181.0	0.253
430	6.07	34.00	3.95	26.78	127.6	150	8.86	33.98	26.36	167.1	0.340
538	5.06	34.03	2.74	26.92	114.1	200	8.76	34.00	26.39	164.1	0.424
646	4.40	34.07	1.78	27.03	104.2	250	8.38	34.01	26.46	157.9	0.507
860	3.69	34.22	0.78	27.22	85.9	300	7.80	34.01	26.55	149.7	0.585
1078	3.18	34.34	0.51	27.36	72.3	400	6.45	34.00	26.73	132.5	0.730
1291	2.79	34.45	0.49	27.49	60.6	500	5.40	34.02	26.87	118.8	0.860
						600	4.67	34.05	26.98	108.5	0.979
						700	4.16	34.10	27.08	99.5	1.090
						800	3.84	34.17	27.16	91.2	1.193
						1000	3.34	34.29	27.31	77.6	1.377

HUGH M. SMITH, August 15, 1955; 1735 GCT; 43°29'N, 165°02'W; wind 200°, force 13 kt; weather, cloudy; sea, slight; wire angle 11°. 76

0	20.26	33.33	5.36	23.44	445.0	0	20.26	33.33	23.44	445.0	0.000
17	19.72	33.47	5.37	23.69	421.5	10	20.24	33.39	23.50	440.1	0.044
29	14.64	33.64	7.51	25.02	294.5	20	19.53	33.49	23.75	415.3	0.087
33	11.40	33.68	7.75	25.70	230.4	30	13.80	33.66	25.22	276.2	0.126
97	7.91	33.58	6.55	26.19	183.3	50	9.90	33.65	25.93	207.8	0.170
146	7.90	33.73	6.45	26.31	172.0	75	8.56	33.60	26.11	190.9	0.220
229	7.35	33.69	5.69	26.36	167.3	100	7.85	33.59	26.21	181.8	0.268
342	6.12	33.87	4.23	26.67	138.4	150	7.88	33.73	26.31	171.8	0.357
464	4.91	33.92	2.95	26.85	120.8	200	7.59	33.71	26.34	169.1	0.443
692	4.01	34.10	1.26	27.09	98.1	250	7.14	33.70	26.40	164.0	0.529
918	3.40	34.24	0.80	27.26	81.9	300	6.59	33.81	26.56	148.5	0.609
1141	2.94	34.32	0.83	27.37	71.6	400	5.52	33.89	26.76	129.8	0.751
1357	2.63	34.39	0.74	27.45	64.0	500	4.70	33.94	26.89	117.1	0.879
						600	4.38	33.98	26.96	110.8	0.999
						700	4.01	34.10	27.09	98.1	1.111
						800	3.72	34.21	27.21	87.1	1.210
						1000	3.20	34.27	27.31	77.8	1.388

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
77	HUGH M. SMITH; August 16, 1955; 0449 GCT; 44°57'N, 165°01'W; wind, 230°, force 14 kt; weather, intermittent drizzle; sea, slight; wire angle, 07°.										
0	17.90	33.03	5.75	23.81	410.0	0	17.90	33.03	23.81	410.0	0.000
11	17.50	33.03	5.79	23.91	400.8	10	17.56	33.03	23.89	402.1	0.041
52	8.19	33.32	7.06	25.95	206.4	20	16.05	33.06	24.27	366.5	0.079
105	6.82	33.34	6.82	26.16	186.6	30	10.93	33.28	25.47	251.7	0.106
173	6.60	33.55	6.47	26.35	168.2	50	8.30	33.32	25.93	208.0	0.152
209	6.40	33.74	5.72	26.53	151.5	75	7.50	33.32	26.05	197.0	0.203
283	5.58	33.84	4.62	26.71	134.0	100	6.96	33.32	26.13	188.9	0.253
408	4.69	33.92	2.65	26.88	118.5	150	7.02	33.49	26.25	178.1	0.345
524	4.24	34.01	1.71	27.00	107.1	200	6.57	33.69	26.46	157.5	0.430
697	3.74	34.15	0.99	27.16	91.7	250	5.83	33.81	26.66	139.1	0.505
924	3.21	34.25	0.69	27.29	79.5	300	5.44	33.85	26.73	131.8	0.574
1151	2.84	34.34	0.55	27.40	69.3	400	4.78	33.91	26.86	120.2	0.704
1368	2.54	34.39	0.55	27.46	63.2	500	4.33	33.99	26.97	109.7	0.823
						600	4.01	34.06	27.06	101.1	0.934
						700	3.72	34.16	27.17	90.7	1.036
						800	3.47	34.19	27.22	86.2	1.131
						1000	3.11	34.28	27.32	76.3	1.306
79	HUGH M. SMITH; August 16, 1955; 1844 GCT; 46°29'N, 164°56'W; wind, 260°, force 14 kt; weather, fog; sea, slight; wire angle, 25°.										
0	14.36	32.70	6.06	24.36	357.6	0	14.36	32.70	24.36	357.6	0.000
10	14.27	32.75	6.08	24.42	352.0	10	14.27	32.75	24.42	352.0	0.036
25	10.03	32.83	7.00	25.27	270.5	20	13.06	32.81	24.71	324.5	0.070
63	5.83	33.03	7.19	26.04	197.8	30	8.83	32.85	25.48	250.7	0.097
142	4.83	33.31	6.70	26.38	165.8	50	6.03	33.00	25.99	202.4	0.141
193	5.46	33.77	5.33	26.67	137.8	75	5.60	33.07	26.10	192.0	0.191
253	4.61	33.87	3.90	26.84	121.4	100	5.32	33.22	26.25	177.8	0.238
340	4.17	33.95	2.48	26.95	111.0	150	4.83	33.35	26.41	162.7	0.324
426	3.92	34.05	1.79	27.06	101.0	200	5.44	33.74	26.65	137.0	0.400
511	3.78	34.09	1.33	27.11	96.5	250	4.67	33.85	26.82	123.7	0.466
679	3.48	34.23	0.91	27.25	83.2	300	4.34	33.91	26.90	115.8	0.526
850	3.12	34.34	0.75	27.37	71.8	400	3.97	34.03	27.04	102.8	0.640
1016	2.88	34.36	0.74	27.41	68.1	500	3.78	34.09	27.11	96.6	0.744
						600	3.61	34.22	27.22	85.4	0.836
						700	3.44	34.24	27.26	82.2	0.925
						800	3.20	34.29	27.32	76.3	1.011
						1000	2.87	34.36	27.41	68.1	1.163
80	HUGH M. SMITH; August 17, 1955; 1043 GCT; 48°07'N, 164°55'W; wind, 350°, force 14 kt; weather, drizzle; sea, slight; wire angle, 22°.										
0	12.33	32.54	6.32	24.64	331.0	0	12.33	32.54	24.64	331.0	0.000
14	12.34	32.54	6.36	24.64	331.1	10	12.33	32.54	24.64	330.9	0.033
24	11.44	32.56	6.50	24.82	313.6	20	12.02	32.54	24.70	325.3	0.066
43	7.12	32.66	7.04	25.58	241.1	30	11.02	32.57	24.90	305.8	0.097
85	4.81	32.83	7.11	26.00	201.8	50	6.30	32.69	25.71	228.9	0.149
157	4.06	33.64	4.24	26.71	134.0	75	5.04	32.80	25.95	206.2	0.203
261	3.92	33.87	2.06	26.92	114.4	100	4.82	33.06	26.18	184.5	0.253
371	3.82	34.00	1.12	27.03	103.7	150	4.05	33.58	26.67	137.7	0.330
478	3.67	34.09	0.71	27.12	95.5	200	4.08	33.75	26.81	125.1	0.396
635	3.38	34.20	0.67	27.23	84.6	250	3.92	33.84	26.89	116.8	0.458
845	3.04	34.29	0.59	27.34	74.8	300	3.88	33.92	26.96	110.3	0.514
1055	2.73	34.38	0.69	27.43	65.6	400	3.80	34.04	27.07	100.5	0.622
1261	2.50	34.42	0.75	27.49	60.6	500	3.61	34.12	27.15	92.8	0.724
						600	3.40	34.18	27.22	86.3	0.817
						700	3.25	34.23	27.27	81.2	0.906
						800	3.12	34.27	27.31	77.1	0.992
						1000	2.80	34.36	27.41	67.5	1.147

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
HUGH M. SMITH; August 17, 1955; 2257 GCT; 49°29'N, 165°00'W; wind, 360°, force 9 kt; weather, cloudy; sea, slight; wire angle, 21°.											81
0	11.27	32.52	6.56	24.82	313.5	0	11.27	32.52	24.82	313.5	0.000
18	11.04	32.50	6.63	24.85	311.4	10	11.30	32.52	24.82	314.0	0.031
37	7.72	32.57	7.09	25.43	255.7	20	10.83	32.50	24.88	307.8	0.063
64	5.03	32.66	7.28	25.84	216.7	30	10.06	32.51	25.02	294.5	0.093
129	3.88	33.21	5.00	26.40	164.0	50	6.30	32.60	25.64	235.6	0.144
174	4.24	33.68	2.57	26.73	132.1	75	4.87	32.68	25.88	213.5	0.199
203	4.20	33.77	2.05	26.81	124.9	100	4.44	32.78	26.00	201.7	0.251
309	3.90	33.93	1.02	26.97	109.9	150	4.01	33.47	26.59	145.7	0.339
419	3.74	34.02	0.75	27.05	101.5	200	4.20	33.76	26.80	125.6	0.406
630	3.38	34.18	0.57	27.22	86.2	250	4.04	33.89	26.92	114.1	0.466
873	2.97	34.25	0.63	27.31	77.1	300	3.92	33.93	26.97	110.0	0.523
1198	2.58	34.34	0.66	27.42	67.3	400	3.78	33.99	27.03	104.0	0.634
1435	2.36	34.43	0.87	27.51	58.7	500	3.62	34.07	27.11	96.6	0.738
						600	3.40	34.16	27.20	87.8	0.835
						700	3.25	34.19	27.24	84.2	0.925
						800	3.06	34.23	27.29	79.5	1.013
						1000	2.80	34.27	27.34	74.4	1.178
HUGH M. SMITH; August 18, 1955; 1156 GCT; 49°42'N, 162°25'W; wind, 310°, force 12 kt; weather, cloudy; sea, slight; wire angle, 04°.											83
0	10.96	-	6.61	-	-	0	10.96	(32.54)	24.89	306.8	0.000
32	7.69	32.59	7.10	25.45	253.8	10	10.99	32.55	24.90	306.4	0.031
45	5.78	32.59	7.30	25.70	230.0	20	10.97	32.55	24.90	306.2	0.062
84	4.74	32.72	7.22	25.92	209.2	30	8.00	32.59	25.41	258.0	0.092
142	4.09	33.62	2.98	26.70	135.0	50	5.47	32.60	25.74	225.9	0.139
232	4.00	33.86	1.05	26.90	116.0	75	4.90	32.68	25.87	213.7	0.194
349	3.85	33.98	0.60	27.01	105.5	100	4.44	32.79	26.01	200.9	0.247
470	3.64	34.09	0.54	27.12	95.3	150	4.08	33.64	26.72	133.4	0.327
585	3.44	34.14	0.54	27.18	89.8	200	4.02	33.76	26.82	124.0	0.392
806	3.05	34.25	0.55	27.30	77.9	250	4.00	33.87	26.91	115.3	0.452
928	2.87	34.25	0.59	27.32	76.3	300	3.94	33.93	26.97	110.0	0.509
1157	2.56	34.34	0.70	27.42	67.2	400	3.79	34.03	27.06	101.1	0.617
1374	2.37	34.40	0.89	27.48	61.0	500	3.60	34.10	27.13	94.2	0.718
						600	3.42	34.14	27.18	89.6	0.815
						700	3.25	34.21	27.25	82.7	0.906
						800	3.09	34.25	27.30	78.2	0.991
						1000	2.70	34.25	27.33	75.0	1.156
HUGH M. SMITH; August 19, 1955; 0008 GCT; 49°48'N, 159°40'W; wind, 330°, force 13 kt; weather, cloudy; sea, moderate; wire angle, 08°.											84
0	11.09	32.54	6.63	24.87	309.1	0	11.09	32.54	24.87	309.1	0.000
30	8.05	32.69	7.05	25.48	251.3	10	11.10	32.54	24.87	309.3	0.031
45	5.26	32.78	7.26	25.91	209.9	20	10.70	32.57	24.96	300.2	0.062
74	4.52	32.80	7.24	26.01	200.9	30	8.05	32.69	25.48	251.3	0.089
132	3.98	33.34	4.53	26.49	154.9	50	5.00	32.78	25.94	207.1	0.133
183	4.26	33.83	2.02	26.85	121.0	75	4.50	32.80	26.01	200.9	0.184
272	4.04	33.95	0.91	26.97	109.9	100	4.04	32.84	26.08	193.5	0.235
397	3.80	34.09	0.57	27.10	97.6	150	4.36	33.66	26.70	134.3	0.318
517	3.63	34.20	0.51	27.21	87.0	200	4.25	33.83	26.85	120.9	0.380
695	3.28	34.27	0.48	27.30	78.4	250	4.12	33.92	26.93	112.8	0.440
923	2.90	34.36	0.60	27.40	68.3	300	4.00	34.00	27.01	105.4	0.495
1147	2.62	34.42	0.80	27.48	61.7	400	3.80	34.09	27.10	96.8	0.598
1363	2.39	34.48	0.86	27.55	55.0	500	3.68	34.16	27.17	90.3	0.695
						600	3.47	34.24	27.26	82.4	0.784
						700	3.30	34.27	27.30	78.7	0.869
						800	3.10	34.31	27.35	73.8	0.951
						1000	2.80	34.38	27.43	66.1	1.100

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HUGH M. SMITH; August 20, 1955; 0017 GCT; 48°04'N, 157°24'W; wind, 290°, force 10 kt; weather, intermittent drizzle; sea, slight; wire angle, 15°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	11.70	32.59	6.46	24.80	315.8	0	11.70	32.59	24.80	315.8	0.000
27	9.32	32.67	7.01	25.27	271.4	10	11.72	32.59	24.79	316.2	0.032
42	5.62	32.80	7.34	25.88	212.8	20	11.68	32.59	24.80	315.7	0.063
69	4.97	32.79	7.28	25.95	206.1	30	8.78	32.69	25.37	261.9	0.093
126	3.92	33.35	4.95	26.51	153.6	50	5.30	32.79	25.91	209.8	0.138
252	3.90	33.95	1.83	26.98	108.2	75	4.84	32.79	25.97	204.9	0.190
377	3.79	34.06	1.08	27.08	98.9	100	4.55	32.79	25.99	202.1	0.242
497	3.60	34.18	0.62	27.20	88.2	150	3.90	33.50	26.62	142.3	0.323
630	3.41	34.29	0.70	27.30	78.2	200	3.96	33.80	26.86	120.1	0.382
762	3.17	34.31	0.72	27.34	74.4	250	3.90	33.94	26.98	109.0	0.438
1000	2.82	34.42	0.65	27.46	63.2	300	3.85	33.98	27.01	105.5	0.491
1236	2.54	34.50	0.70	27.55	54.8	400	3.73	34.07	27.10	97.6	0.598
1500	2.29	34.54	0.83	27.60	49.7	500	3.60	34.15	27.17	90.5	0.696
						600	3.44	34.27	27.28	80.0	0.786
						700	3.26	34.30	27.32	76.1	0.869
						800	3.07	34.32	27.36	72.8	0.948
						1000	2.82	34.42	27.46	63.2	1.099

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HUGH M. SMITH; August 19, 1955; 1154 GCT; 49°35'N, 157°22'W; wind, 280°, force 9 kt; weather, missing; sea, slight; wire angle, 08°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	12.42	32.61	6.35	24.68	327.5	0	12.42	32.61	24.68	327.5	0.000
18	11.22	32.63	6.68	24.91	304.9	10	12.47	32.61	24.67	328.2	0.033
28	6.77	32.83	7.41	25.76	224.0	20	10.10	32.67	25.14	283.5	0.066
42	5.72	32.82	7.30	25.89	212.1	30	6.52	32.83	25.80	220.9	0.089
63	5.46	32.87	7.16	25.96	205.4	50	5.53	32.85	25.93	207.9	0.132
104	5.16	33.10	6.98	26.17	185.0	75	5.45	32.89	25.98	203.9	0.183
211	4.68	33.81	4.35	26.79	126.8	100	5.24	33.04	26.12	190.3	0.235
315	4.24	33.91	2.47	26.91	115.0	150	5.08	33.45	26.46	157.9	0.319
417	3.96	34.01	1.78	27.03	104.3	200	4.72	33.81	26.78	127.1	0.390
628	3.58	34.19	0.88	27.21	87.3	250	4.48	33.87	26.86	120.1	0.452
839	3.16	34.32	0.66	27.35	73.6	300	4.33	33.91	26.90	115.8	0.512
1045	2.84	34.36	0.68	27.41	67.8	400	3.99	34.00	27.02	105.2	0.618
1258	2.59	34.43	0.72	27.49	60.6	500	3.80	34.10	27.11	96.0	0.720
						600	3.59	34.18	27.20	88.0	0.849
						700	3.40	34.22	27.25	83.4	0.909
						800	3.21	34.29	27.32	76.4	0.996
						1000	2.92	34.35	27.39	69.3	1.152

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HUGH M. SMITH; August 20, 1955; 1351 GCT; 46°28'N, 157°06'W; wind, 310°, force 9 kt; weather, missing; sea, smooth; wire angle, 00°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	14.42	32.77	6.14	24.40	354.0	0	14.42	32.77	24.40	354.0	0.000
27	9.72	32.95	6.98	25.42	256.8	10	14.42	32.77	24.40	354.0	0.035
37	7.75	33.19	7.35	25.91	210.0	20	12.80	32.82	24.76	319.0	0.071
64	6.81	33.15	7.03	26.01	200.7	30	9.34	32.99	25.51	247.9	0.097
117	6.30	33.24	6.93	26.14	187.8	50	7.21	33.16	25.96	205.0	0.140
234	5.62	33.88	4.74	26.74	131.7	75	6.75	33.15	26.02	199.9	0.190
350	4.62	33.96	2.84	26.91	115.0	100	6.32	33.17	26.09	193.1	0.240
474	4.23	34.02	1.82	27.01	106.2	150	6.20	33.50	26.36	167.1	0.332
590	3.92	34.14	1.21	27.13	94.2	200	5.98	33.82	26.65	140.2	0.409
708	3.63	34.22	0.88	27.22	85.4	250	5.48	33.89	26.76	129.3	0.477
936	3.17	34.30	0.66	27.33	75.2	300	5.02	33.92	26.84	122.1	0.542
1165	2.78	34.40	0.61	27.45	64.3	400	4.44	33.98	26.95	111.5	0.660
1383	2.51	34.45	0.71	27.51	58.5	500	4.19	34.05	27.03	103.5	0.773
						600	3.83	34.16	27.15	92.1	0.875
						700	3.66	34.21	27.21	86.4	0.971
						800	3.42	34.26	27.28	80.5	1.060
						1000	3.02	34.34	27.38	70.9	1.226

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; August 21, 1955; 0446 GCT; 44°57'N, 157°26'W; wind, calm; weather, cloudy; sea, smooth; wire angle, 03°. 90

0	16.36	33.09	5.89	24.22	371.0	0	16.36	33.09	24.22	371.0	0.000
11	16.12	33.06	5.93	24.25	368.1	10	16.13	33.06	24.25	368.2	0.037
24	12.67	33.26	6.60	25.13	284.0	20	13.08	33.24	25.04	293.1	0.071
35	10.46	33.33	7.78	25.56	240.3	30	11.10	33.32	25.47	251.8	0.099
65	8.36	33.37	6.85	25.96	205.0	50	9.19	33.35	25.82	218.9	0.146
109	7.50	33.45	6.66	26.15	187.3	75	8.07	33.38	26.01	200.3	0.198
218	7.22	33.93	5.53	26.56	148.0	100	7.61	33.42	26.11	191.1	0.247
328	5.89	33.93	4.01	26.74	131.0	150	7.38	33.68	26.35	168.4	0.339
435	4.80	33.93	2.57	26.87	119.0	200	7.30	33.84	26.48	155.6	0.421
652	3.95	34.07	1.17	27.07	99.7	250	6.90	33.93	26.61	143.8	0.498
870	3.40	34.23	0.74	27.25	82.7	300	6.24	33.92	26.69	136.2	0.568
1081	3.00	34.33	0.59	27.37	71.4	400	5.09	33.93	26.84	122.0	0.702
1300	2.68	34.38	0.70	27.44	65.1	500	4.45	33.95	26.92	113.9	0.824
						600	4.10	34.01	27.01	105.5	0.938
						700	3.79	34.11	27.12	95.1	1.046
						800	3.59	34.16	27.18	89.6	1.146
						1000	3.15	34.29	27.33	75.7	1.325

HUGH M. SMITH; August 21, 1955; 1706 GCT; 43°23'N, 157°24'W; wind, 140°, force 6 kt; weather, partly cloudy; sea, smooth; wire angle, 03°. 93

0	18.74	33.48	5.39	23.95	397.0	0	18.74	33.48	23.95	397.0	0.000
14	18.74	33.51	6.85	23.97	395.0	10	18.74	33.50	23.96	395.7	0.040
27	14.25	33.53	7.50	25.02	294.8	20	16.20	33.53	24.59	335.4	0.079
42	11.14	33.62	7.01	25.70	230.5	30	13.84	33.54	25.11	286.0	0.109
95	8.31	33.58	6.45	26.13	189.0	50	10.19	33.62	25.86	214.5	0.156
105	8.09	33.57	6.24	26.16	186.4	75	8.69	33.60	26.09	193.0	0.207
216	8.06	33.86	5.98	26.39	164.7	100	8.20	33.57	26.14	188.1	0.255
321	6.90	33.91	5.02	26.59	145.2	150	7.95	33.73	26.30	172.6	0.345
487	4.96	33.93	3.83	26.85	120.5	200	8.00	33.77	26.33	170.4	0.432
651	4.17	34.02	1.83	27.01	105.6	250	7.80	33.88	26.44	159.5	0.516
867	3.57	34.16	0.88	27.18	89.4	300	7.16	33.91	26.56	148.6	0.595
1079	3.08	34.27	0.50	27.32	76.7	400	5.89	33.92	26.74	131.8	0.740
1296	2.74	34.36	0.60	27.42	67.1	500	4.84	33.94	26.87	118.6	0.869
						600	4.34	33.99	26.97	109.6	0.989
						700	4.00	34.04	27.04	102.4	1.102
						800	3.73	34.09	27.11	96.2	1.208
						1000	3.23	34.23	27.27	81.0	1.400

HUGH M. SMITH; August 22, 1955; 0258 GCT; 41°56'N, 157°22'W; wind, 150°, force 9 kt; weather, cloudy; sea, slight; wire angle, 11°. 94

0	20.57	33.86	5.59	23.76	414.6	0	20.57	33.86	23.76	414.6	0.000
20	16.88	33.75	5.58r	24.60	334.3	10	20.44	33.86	23.80	411.4	0.041
34	13.66	33.87	8.00	25.41	258.0	20	16.88	33.75	24.60	334.3	0.082
45	11.35	33.82	7.80	25.82	219.1	30	14.32	33.85	25.25	272.8	0.112
66	9.70	33.84	6.50	26.12	190.5	50	10.95	33.82	25.89	212.3	0.159
110	9.26	33.91	6.50	26.24	178.5	75	9.48	33.87	26.18	184.9	0.209
213	8.90	34.00	5.93	26.37	166.3	100	9.27	33.90	26.23	179.6	0.254
322	7.62	33.98	4.88	26.55	149.6	150	9.00	34.00	26.36	167.7	0.342
426	6.24	33.97	2.58u	26.73	132.3	200	8.88	34.00	26.38	166.0	0.427
640	4.48	34.08	1.38	27.03	104.3	250	8.76	34.00	26.39	164.2	0.511
854	3.71	34.22	0.77	27.22	86.2	300	7.99	33.98	26.49	154.6	0.593
1062	3.21	34.32	0.58	27.34	74.1	400	6.60	33.97	26.68	136.8	0.743
1276	2.82	34.40	0.47	27.44	64.7	500	5.46	33.98	26.84	122.2	0.876
						600	4.73	34.05	26.97	109.1	0.998
						700	4.20	34.12	27.09	98.4	1.106
						800	3.82	34.19	27.18	89.5	1.207
						1000	3.38	34.28	27.30	78.7	1.391

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
96	HUGH M SMITH; August 22, 1955; 1437 GCT; 40°27'N, 157°31'W; wind, 190°, force 10 kt; weather, drizzle; sea, smooth; wire angle, 08°.										
0	21.68	33.79	5.36	23.41	448.1	0	21.68	33.79	23.41	448.1	0.000
21	16.38	33.74	7.16	24.71	324.0	10	21.77	33.79	23.38	451.0	0.045
37	13.06	33.79	7.43	25.46	252.5	20	17.20	33.74	24.52	342.2	0.090
68	10.58	33.84	6.26	25.96	205.0	30	14.22	33.77	25.21	276.4	0.119
136	8.96	33.84	6.15	26.24	179.0	50	11.65	33.82	25.76	224.6	0.169
252	8.39	34.04	5.35	26.48	155.8	75	10.37	33.84	26.01	201.1	0.222
376	6.67	33.96	4.24	26.67	138.3	100	9.68	33.84	26.12	190.2	0.271
499	5.27	33.98	2.83	26.86	120.1	150	8.63	33.86	26.30	172.7	0.363
630	4.46	34.09	1.79	27.04	103.3	200	8.81	34.02	26.40	163.5	0.448
763	3.94	34.19	1.03	27.17	90.6	250	8.39	34.04	26.48	155.8	0.529
1001	3.30	34.31	0.51	27.33	75.7	300	7.80	34.02	26.55	148.9	0.607
1239	2.84	34.40	0.36	27.44	64.8	400	6.36	33.96	26.71	134.5	0.755
1502	2.49	34.47	0.40	27.53	56.7	500	5.26	33.98	26.86	120.0	0.887
						600	4.63	34.06	26.99	107.3	1.007
						700	4.18	34.15	27.11	95.8	1.115
						800	3.80	34.20	27.19	85.5	1.215
						1000	3.30	34.31	27.33	75.7	1.392
97	HUGH M. SMITH; August 23, 1955; 0202 GCT; 38°57'N, 157°30'W; wind, 090°, force 7 kt; weather, partly cloudy; sea, smooth; wire angle, 05°.										
0	23.70	34.11	5.10	23.08	480.0	0	23.70	34.11	23.08	480.0	0.000
19	22.12	34.14	5.51	23.55	434.7	10	23.41	34.12	23.18	471.2	0.048
32	15.68	34.13	7.34	25.17	280.5	20	20.40	34.13	24.01	390.7	0.094
44	14.42	34.13	7.38	25.45	254.3	30	16.09	34.13	25.08	289.0	0.126
66	11.98	34.16	6.24	25.96	205.2	50	13.26	34.14	25.69	230.7	0.178
112	11.22	34.19	5.75	26.12	189.8	75	11.63	34.18	26.04	197.8	0.231
219	9.78	34.11	5.65	26.31	171.8	100	11.30	34.19	26.11	191.3	0.280
329	8.72	34.11	5.22	26.48	155.6	150	10.78	34.17	26.19	183.6	0.375
434	7.07	34.02	4.41	26.66	138.8	200	10.07	34.13	26.28	175.0	0.466
651	4.75	34.02	2.24	26.95	111.5	250	9.45	34.11	26.37	166.7	0.552
869	3.82	34.20	0.93	27.19	88.7	300	9.03	34.11	26.44	160.1	0.637
1082	3.24	34.31	0.42	27.33	75.1	400	7.60	34.05	26.61	144.0	0.793
1300	2.81	34.40	0.32	27.44	64.7	500	6.30	33.99	26.74	131.6	0.937
						600	5.26	33.99	26.87	119.2	1.070
						700	4.40	34.08	27.03	103.5	1.188
						800	4.02	34.16	27.14	93.7	1.294
						1000	3.48	34.27	27.28	80.3	1.484
99	HUGH M. SMITH; August 23, 1955; 1356 GCT; 37°26'N, 157°30'W; wind, 120°, force 8 kt; weather, partly cloudy; sea, smooth; wire angle, 05°.										
0	24.09	34.39	4.95	23.18	470.6	0	24.09	34.39	23.18	470.6	0.000
13	23.92	34.39	4.96	23.23	465.9	10	23.96	34.39	23.21	467.0	0.047
27	22.42	34.28	5.23	23.57	432.5	20	23.27	34.35	23.39	450.5	0.093
42	16.18	34.14	6.08	25.07	290.3	30	20.40	34.18	24.05	387.1	0.138
89	13.02	34.11	5.75	25.72	228.3	50	15.54	34.14	25.21	276.7	0.199
163	11.30	34.11	5.39	26.05	197.2	75	13.61	34.12	25.60	239.1	0.264
268	10.23	34.14	5.15	26.26	176.8	100	12.76	34.11	25.77	223.5	0.321
374	8.85	34.09	4.72	26.45	158.9	150	11.50	34.11	26.01	200.5	0.429
483	6.92	34.02	3.84	26.68	136.9	200	11.02	34.12	26.11	191.4	0.527
646	5.04	34.04	2.42	26.93	113.1	250	10.47	34.14	26.22	180.6	0.623
862	3.88	34.22	0.90	27.20	87.7	300	9.87	34.13	26.31	171.6	0.714
1071	3.26	34.33	0.38	27.35	73.8	400	8.40	34.08	26.51	153.0	0.883
1287	2.84	34.42	0.32	27.46	63.3	500	6.64	34.01	26.71	134.1	1.034
						600	5.48	34.00	26.85	120.9	1.168
						700	4.66	34.09	27.01	105.4	1.289
						800	4.13	34.17	27.13	93.9	1.397
						1000	3.47	34.28	27.29	79.5	1.587

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

HUGH M. SMITH; August 24, 1955; 0030 GCT; 35°56'N, 157°30'W; wind, 100°, force 09 kt; weather, partly cloudy; sea, smooth; wire angle, 02°. 100

0	24.47	34.51	4.96	23.15	472.8	0	24.47	34.51	23.15	472.8	0.000
19	23.04	34.26	5.16	23.38	450.6	10	24.31	34.47	23.17	471.4	0.047
29	21.78	34.31	5.40	23.78	413.2	20	22.98	34.26	23.40	449.0	0.094
39	17.60	34.13	6.06	24.72	323.0	30	21.58	34.31	23.83	408.1	0.138
66	15.38	34.16	6.04	25.26	271.9	50	16.31	34.14	25.04	293.3	0.207
107	13.08	34.13	5.96	25.73	227.9	75	14.83	34.15	25.37	261.1	0.275
216	10.84	34.14	5.13	26.15	186.8	100	13.44	34.13	25.65	235.0	0.339
326	9.40	34.11	4.75	26.38	165.8	150	11.98	34.13	25.94	207.3	0.448
432	7.98	34.04	4.11	26.54	149.8	200	11.10	34.14	26.11	191.4	0.550
649	4.91	34.02	2.09	26.93	113.2	250	10.36	34.14	26.24	179.0	0.644
866	3.79	34.20	0.74	27.19	88.4	300	9.73	34.13	26.34	169.6	0.734
1078	3.18	34.34	0.34	27.36	72.3	400	8.38	34.06	26.50	154.2	0.902
1295	2.82	34.44	0.39	27.48	61.7	500	7.04	34.01	26.66	139.3	1.056
						600	5.60	34.00	26.83	122.5	1.197
						700	4.48	34.07	27.02	105.0	1.315
						800	4.00	34.16	27.14	93.5	1.423
						1000	3.38	34.27	27.29	79.4	1.613

HUGH M. SMITH; August 24, 1955; 1207 GCT; 34°28'N, 157°30'W; wind, 100°, force 14 kt; weather, missing; sea, slight; wire angle, 11°. 102

0	24.16	34.60	4.92	23.31	457.5	0	24.16	34.60	23.31	457.5	0.000
21	24.18	34.59	4.92	23.30	458.8	10	24.16	34.59	23.31	458.0	0.046
32	21.62	34.43	5.63	23.91	400.5	20	24.17	34.59	23.31	458.3	0.092
57	16.14	34.41	6.25	25.28	269.8	30	22.48	34.48	23.71	419.6	0.137
115	13.19	34.31	5.74	25.84	216.8	50	16.83	34.41	25.12	285.2	0.201
231	11.64	34.27	5.55	26.11	191.2	75	14.57	34.37	25.60	239.6	0.267
345	10.02	34.20	5.14	26.34	168.8	100	13.72	34.34	25.75	225.1	0.326
464	8.16	34.09	4.57	26.56	148.7	150	12.58	34.30	25.95	206.0	0.434
578	6.25	34.00	3.50	26.75	129.9	200	11.97	34.28	26.06	196.1	0.536
694	4.89	34.04	2.17	26.95	111.5	250	11.41	34.26	26.14	188.0	0.635
920	3.78	34.21	0.69	27.20	87.6	300	10.72	34.23	26.24	178.3	0.729
1146	3.14	34.36	0.27	27.38	70.4	400	9.19	34.15	26.44	159.5	0.904
1361	2.86	34.46	0.39	27.49	60.5	500	7.54	34.05	26.62	143.1	1.062
						600	6.00	34.00	26.79	127.0	1.204
						700	4.84	34.04	26.95	111.0	1.331
						800	4.22	34.11	27.08	99.4	1.445
						1000	3.52	34.25	27.26	82.2	1.644

HUGH M. SMITH; August 24-25, 1955; 2321, 0004 GCT; 32°56'N, 157°29'W; wind, 110°, force 14 kt; weather, partly cloudy; sea, slight; wire angle, 14°, 28°. 103

0	24.22	35.08	4.85	23.66	424.7	0	24.22	35.08	23.66	424.7	0.000
12	24.16	35.08	4.86	23.67	423.0	10	24.16	35.08	23.67	423.0	0.042
38	22.71	34.97	5.22	24.01	390.6	20	24.10	35.08	23.69	421.3	0.085
52	18.73	34.70	5.73	24.88	308.5	30	24.02	35.07	23.71	419.9	0.127
65	17.80	34.70	5.69	25.11	286.3	50	18.85	34.71	24.86	310.3	0.200
112	14.48	34.40	5.53	25.64	235.7	75	17.10	34.65	25.24	273.8	0.273
225	11.83	34.25	5.18	26.06	196.1	100	15.15	34.46	25.54	245.0	0.339
338	10.50	34.20	5.08	26.26	176.8	150	13.22	34.32	25.84	216.7	0.455
455	8.60	34.09	4.55	26.49	155.3	200	12.18	34.26	26.00	201.5	0.561
680	5.10	34.03	2.31	26.92	114.5	250	11.57	34.24	26.10	192.3	0.671
						300	11.00	34.22	26.19	183.7	0.759
858	4.11	34.16	0.93	27.13	94.5	400	9.53	34.14	26.38	165.6	0.940
1070	3.38	34.33	0.38	27.34	74.9	500	7.88	34.06	26.57	147.0	1.103
1274	2.96	34.42	0.38	27.45	64.3	600	6.28	34.00	26.75	130.3	1.250
						700	4.96	34.05	26.95	111.4	1.379
						800	4.40	34.12	27.07	100.4	1.494
						1000	3.61	34.27	27.26	81.7	1.695

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	σ_t g/L	δ_T 10^{-5} cm^3/g	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
105	HUGH M. SMITH; August 25, 1955; 1233 GCT; 31°28'N, 157°30'W; wind, 080°, force 16 kt; weather, partly cloudy; sea, moderate; wire angle, 07°.										
0	24.46	35.48	4.80	23.89	402.6	0	24.46	35.48	23.89	402.6	0.000
48	20.20	34.94	5.64	24.68	327.1	10	24.52	35.50	23.88	403.2	0.040
63	18.22	34.72	5.74	25.02	294.4	20	24.61	35.54	23.89	402.7	0.080
79	17.04	34.68	5.69	25.28	270.3	30	24.69	35.58	23.89	402.1	0.121
147	13.81	34.38	5.47	25.77	223.9	50	19.85	34.90	24.74	321.1	0.195
231	12.24	34.31	5.27	26.03	198.8	75	17.28	34.70	25.23	274.3	0.269
346	10.69	34.23	5.06	26.25	177.8	100	15.80	34.56	25.47	251.7	0.336
468	8.67	34.13	4.58	26.51	153.3	150	13.74	34.38	25.78	222.5	0.455
585	6.56	34.00	3.53	26.71	133.8	200	12.76	34.33	25.94	207.2	0.564
699	5.12	34.02	1.85	26.91	115.5	250	11.99	34.30	26.07	195.0	0.666
926	3.91	34.23	0.50	27.21	87.3	300	11.34	34.27	26.16	186.1	0.765
1153	3.35	34.41	0.33	27.40	68.7	400	9.81	34.18	26.36	167.1	0.949
1370	3.02	34.51	0.68	27.51	58.1	500	8.12	34.10	26.57	147.4	1.113
						600	6.26	34.00	26.75	130.1	1.262
						700	5.09	34.02	26.91	115.1	1.394
						800	4.42	34.11	27.06	101.4	1.511
						1000	3.73	34.28	27.26	81.9	1.709
106	HUGH M. SMITH; August 26, 1955; 0015, 0042 GCT; 29°51'N, 157°30'W; wind, 090°, force 18 kt; weather, partly cloudy; sea, moderate; wire angle, 21°, 25°.										
0	24.50	35.50	4.80	23.89	402.5	0	24.50	35.50	23.89	402.5	0.000
19	24.44	35.50	4.80	23.91	400.8	10	24.47	35.50	23.90	401.7	0.040
49	24.34	35.50	4.84	23.94	398.0	20	24.43	35.50	23.91	400.4	0.080
67	19.78	35.06	5.50	24.88	307.8	30	24.40	35.50	23.92	399.7	0.120
105	18.38	35.00	5.29	25.20	278.1	50	24.33	35.50	23.94	397.6	0.200
						75	19.45	35.05	24.96	300.3	0.281
199	14.53	34.45	4.79	25.67	233.2	100	18.53	35.01	25.17	280.8	0.354
292	12.14	34.34	4.84	26.07	194.8	150	16.67	34.74	25.41	257.4	0.490
394	10.12	34.19	4.64	26.32	171.3	200	14.52	34.45	25.67	232.9	0.614
592	6.52	34.01	3.29	26.73	132.7	250	13.28	34.39	25.88	212.6	0.730
791	4.57	34.14	1.05	27.06	100.7	300	11.96	34.33	26.10	192.3	0.835
987	3.77	34.27	0.38	27.25	82.9	400	10.01	34.18	26.33	170.4	1.022
1188	3.30	34.45	0.69	27.44	65.2	500	8.12	34.08	26.56	149.0	1.189
1382	2.96	34.50	1.02	27.51	58.3	600	6.44	34.01	26.74	131.7	1.336
						700	5.39	34.03	26.89	117.7	1.470
						800	4.48	34.14	27.07	99.8	1.589
						1000	3.72	34.28	27.26	81.8	1.785
108	HUGH M. SMITH; August 26, 1955; 1241 GCT; 28°27'N, 157°31'W; wind, 080°, force 19 kt; weather, partly cloudy; sea, moderate; wire angle, 25°.										
0	24.76	35.49	4.74	23.80	410.6	0	24.76	35.49	23.80	410.7	0.000
37	24.78	35.48	4.76	23.79	412.0	10	24.76	35.49	23.80	410.7	0.041
52	22.23	35.33	5.34	24.42	351.8	20	24.76	35.49	23.80	410.7	0.082
96	19.28	35.08	5.38	25.03	293.8	30	24.77	35.48	23.79	411.7	0.123
153	16.83	34.76	5.06	25.39	259.7	50	24.00	35.44	23.99	392.6	0.206
211	14.72	34.58	5.06	25.73	227.4	75	20.28	35.17	24.83	312.5	0.290
318	11.58	34.26	4.89	26.11	191.1	100	19.16	35.07	25.05	291.8	0.366
428	9.72	34.16	4.62	26.36	167.2	150	16.93	34.76	25.36	262.4	0.505
533	7.41	34.01	3.94	26.61	144.3	200	15.05	34.61	25.68	232.1	0.631
640	5.80a)	33.99	2.79	26.80	125.4	250	13.58	34.45	25.87	214.2	0.746
852	4.22	34.20	0.78	27.15	92.6	300	12.03	34.30	26.06	195.7	0.852
1063	3.58	34.39	0.40	27.36	72.2	400	10.23	34.20	26.31	172.2	1.042
1266	3.11	34.47	0.67	27.47	61.9	500	8.17	34.06	26.53	151.0	1.213
						600	6.32	33.98	26.72	132.8	1.362
						700	5.27	34.03	26.90	116.4	1.496
						800	4.50	34.13	27.06	100.8	1.616
						1000	3.75	34.34	27.31	77.5	1.812

a) Mean value of 5.84 and 5.75°C.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
HUGH M. SMITH; August 26, 1955; 2343 GCT; 26°58'N, 157°27'W; wind, 070°, force 19 kt; weather, partly cloudy; sea, rough; wire angle, 24°.											109
0	24.48	35.34	4.84	23.77	413.5	0	24.48	35.34	23.77	413.5	0.000
25	24.39	35.33	4.84	23.79	411.7	10	24.44	35.34	23.78	412.5	0.041
58	23.02	35.29	5.17	24.17	375.7	20	24.39	35.33	23.79	411.5	0.082
78	21.92	35.29	5.08	24.48	346.3	30	24.40	35.32	23.78	412.7	0.124
106	21.11	35.32	4.91	24.72	323.1	50	23.77	35.30	23.96	396.0	0.207
211	18.04	34.93	4.75	25.23	275.2	75	22.02	35.29	24.45	349.0	0.299
316	13.78	34.37	4.74	25.76	224.0	100	21.27	35.32	24.68	327.1	0.384
426	10.84	-	4.80	-	-	150	19.82	35.18	24.97	300.0	0.542
531	8.48	34.04	4.18	26.47	157.2	200	18.36	34.98	25.18	279.1	0.688
638	6.29	33.96	2.79	26.72	133.5	250	16.55	34.73	25.43	255.5	0.826
847	4.46	34.18	0.70	27.11	96.6	300	14.30	34.44	25.71	229.1	0.953
1056	3.82	34.38	0.78	27.33	75.2	400	11.47	34.20	26.09	193.3	1.171
1269	3.39	34.51	1.22	27.48	61.4	500	9.14	34.07	26.39	164.8	1.359
						600	7.04	33.98	26.63	141.8	1.521
						700	5.54	33.99	26.83	122.5	1.662
						800	4.71	34.10	27.02	105.2	1.788
						1000	3.99	34.32	27.27	81.1	1.991
HUGH M. SMITH; August 27, 1955; 1202 GCT; 25°30'N, 157°33'W; wind, 070°, force 18 kt; weather, partly cloudy; sea, moderate; wire angle, 23°.											111
0	24.16	35.45	4.81	23.95	396.5	0	24.16	35.45	23.95	396.5	0.000
24	24.18	35.42	4.82	23.92	399.2	10	24.16	35.44	23.95	397.1	0.040
47	24.20	35.44	4.81	23.94	398.3	20	24.17	35.43	23.94	398.0	0.079
76	21.64	35.35	5.29	24.60	334.7	30	24.18	35.43	23.93	398.4	0.119
141	19.11	35.15	4.80	25.13	284.8	50	24.16	35.44	23.95	397.1	0.199
208	16.72	34.78	4.79	25.43	255.7	75	21.68	35.35	24.59	335.5	0.289
313	12.75	34.32	4.74	25.94	207.7	100	20.68	35.30	24.83	313.1	0.371
422	10.29	34.21	4.60	26.31	172.5	150	18.79	35.10	25.17	280.7	0.520
525	8.00	34.09	3.87	26.58	146.4	200	17.02	34.83	25.40	259.0	0.657
629	6.02	34.03	2.18	26.81	125.1	250	15.02	34.54	25.63	236.5	0.785
837	4.56	34.29	0.65	27.18	89.3	300	13.15	34.35	25.88	213.1	0.902
1044	3.86	34.42	0.92	27.36	72.5	400	10.79	34.23	26.23	179.3	1.104
1246	3.36	34.50	1.27	27.47	61.8	500	8.56	34.11	26.51	153.2	1.278
						600	6.40	34.03	26.76	129.8	1.427
						700	5.30	34.10	26.95	111.6	1.556
						800	4.72	34.25	27.13	94.0	1.668
						1000	4.00	34.39	27.32	76.1	1.856
HUGH M. SMITH; August 27, 1955; 2327 GCT; 23°54'N, 157°32'W; wind, 080°, force 22 kt; weather, partly cloudy; sea, rough; wire angle, 20°.											112
0	24.48	35.04	4.81	23.55	435.0	0	24.48	35.04	23.55	435.0	0.000
34	24.46	35.04	4.80	23.56	434.4	10	24.47	35.04	23.55	434.6	0.043
69	24.19	35.24	4.80	23.79	412.4	20	24.47	35.04	23.55	434.6	0.087
93	22.39	35.31	5.13	24.36	357.5	30	24.46	35.04	23.55	434.5	0.130
136	20.34	35.30	4.96	24.92	304.7	50	24.46	35.14	23.63	427.2	0.218
224	16.60	34.74	4.58	25.43	256.0	75	23.60	35.29	24.00	392.0	0.323
336	12.23	34.25	4.62	25.98	203.1	100	22.01	35.32	24.48	346.6	0.415
454	9.22	34.14	4.24	26.43	160.8	150	19.67	35.24	25.05	291.8	0.576
567	6.72	34.05	2.83	26.73	132.2	200	17.82	34.94	25.29	269.2	0.719
679	5.32	34.13	1.48	26.97	109.6	250	15.38	34.57	25.58	241.5	0.851
900	4.18	34.32	0.85	27.25	83.1	300	13.41	34.35	25.82	218.3	0.970
1122	3.57	34.48	0.73	27.44	65.3	400	10.51	34.18	26.24	178.5	1.177
1337	3.19	34.55	1.24	27.53	56.5	500	8.21	34.10	26.56	148.8	1.347
						600	6.14	34.05	26.81	125.0	1.493
						700	5.19	34.16	27.01	105.7	1.617
						800	4.60	34.25	27.15	92.8	1.726
						1000	3.83	34.40	27.35	73.7	1.912

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HUGH M. SMITH; August 28, 1955; 1055 GCT; 22°30'N, 157°36'W; wind, 060°, force 14 kt; weather, showers; sea, rough; wire angle, 24°.

OBSERVED				COMPUTED		INTERPOLATED			COMPUTED		
Z	T	S	O_2	σ_t	δ_T	Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	ml/L	g/L	10^{-5} cm^3/g	m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0	24.34	34.86	4.76	23.45	444.1	0	24.34	34.86	23.45	444.1	0.000
18	24.36	34.87	4.79	23.46	443.7	10	24.35	34.86	23.45	444.2	0.044
36	24.36	34.87	4.79	23.46	443.7	20	24.36	34.87	23.46	443.7	0.089
60	24.26	34.92	4.86	23.52	437.3	30	24.36	34.87	23.46	443.7	0.133
130	21.72	35.16	4.80	24.44	350.2	50	24.35	34.88	23.47	442.8	0.222
206	19.70	35.18	4.59	25.00	297.0	75	23.71	35.05	23.78	412.4	0.330
309	13.07	34.31	4.44	25.86	214.4	100	22.73	35.11	24.12	380.8	0.430
417	9.32	34.13	4.18	26.41	163.2	150	21.14	35.18	24.61	333.9	0.610
520	7.18	34.13	2.00	26.73	132.3	200	19.82	35.19	24.97	299.3	0.772
626	6.13	34.22	1.10	26.94	112.2	250	16.56	34.75	25.45	254.3	0.915
						300	13.48	34.36	25.82	219.0	1.040
						400	9.77	34.14	26.34	169.4	1.242
						500	7.50	34.12	26.68	137.3	1.404
						600	6.36	34.18	26.88	118.0	1.541

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; July 27, 1955; 2037, 2054 GCT; 49°10'N, 127°58'W; sounding, 1369 fm; wind, 280°, force 3; weather, cloudy; sea, moderate; air temperature, dry 61°, wet 56°; barometer, 1021.5 mb. 1

0	13.9	32.21	5.78	1.30	0	13.9	32.20	5.78	96.6	1.25	24.07	385.2	0.000
10	13.82	32.21	5.79	0.50	10	13.82	32.21	5.79	96.8	0.50	24.09	383.2	0.038
20	13.45	32.24	5.78	0.30	20	13.45	32.24	5.78	96.1	0.30	24.20	373.7	0.076
29	12.85	32.31	6.07	0.60	30	12.85	32.31	6.07	100.0	0.60	24.36	357.2	0.113
38	9.20	32.41	6.06	0.85	50	8.36	32.53	5.89	88.3	0.80	25.31	267.0	0.175
48	8.47	32.53	5.90	0.80	75	7.12	32.57	5.87	85.9	1.30	25.52	247.8	0.240
72	7.16	32.57	5.88	1.30	100	6.55	33.00	5.56	80.4	1.45	25.94	207.8	0.297
96	6.47	32.91	5.81	1.45	150	6.47	33.64	3.92	56.9	2.10	26.42	161.8	0.392
121	7.00	33.46	3.74	1.95	200	6.21	33.86	3.06	44.2	2.10	26.65	140.0	0.468
145	6.49	33.62	3.99	2.10	250	5.75	33.89	2.52	36.0	2.20	26.74	131.8	0.537
					300	5.34	33.92	1.97	27.9	2.30	26.81	124.8	0.603
193	6.27	33.86	3.10	2.05	400	5.02	34.05	0.96	13.7	3.50	26.94	112.5	0.726
290	5.38	33.91	2.07	2.30	500	4.61	34.13	0.58	8.2	3.45	27.05	102.0	0.838
386	5.08	34.05	1.05	3.50	600	4.24	34.19	0.46	6.4	3.30	27.14	93.0	0.941
583	4.26	34.18	0.46	3.30	700	4.09	34.25	0.52	7.1	3.10	27.21	87.0	1.036
781	3.95	34.30	0.55	3.00	800	3.91	34.29	0.54	7.4	2.95	27.26	82.0	1.129
981	3.46	-	0.47	2.55	1000	3.44	34.37	0.45	6.1		27.37	71.7	1.296
1178	3.04	34.44	0.36	-									

HMCS STE. THERESE; July 28, 1955; 0550, 0657 GCT; 49°11'N, 129°52'W; sounding, 1330 fm; wind, 300°, force 3; weather, rain; sea, rough; air temperature, dry 56°, wet 53°; barometer, 1024.5 mb. 2

0	14.0	32.53	5.81		0	14.0	32.50	5.81	97.7		24.28	365.0	0.000
10	14.0	32.52	5.89		10	14.0	32.51	5.89	99.1		24.29	364.0	0.036
20	12.89	32.50	6.07		20	12.89	32.51	6.07	100.0		24.52	342.8	0.073
30	10.89	32.53	6.28		30	10.89	32.52	6.28	99.5		24.90	306.5	0.104
40	9.21	32.58	6.47		50	8.47	32.62	6.62	99.5		25.36	262.6	0.215
50	8.47	32.62	6.62		75	7.26	32.65	6.35	93.1		25.56	243.8	0.224
74	7.26	32.65	6.35		100	6.67	32.82	5.88	85.4		25.78	223.2	0.283
99	6.67	32.81	5.75		150	6.54	33.52	4.11	59.7		26.35	168.5	0.383
123	6.53	33.05	5.33		200	6.12	33.81	3.29	47.4		26.62	142.0	0.461
148	6.54	33.48	4.18		250	5.72	33.86	2.74	39.2		26.71	133.5	0.532
					300	5.30	33.89	2.19	31.1		26.78	127.0	0.600
198	6.5	33.81	3.31		400	4.74	34.00	1.33	18.6		26.94	112.2	0.723
297	5.31	33.89	2.23		500	4.25	34.10	0.97	13.5		27.07	100.2	0.834
396	4.76	34.00	1.34		600	3.92	34.18	0.74	10.2		27.18	90.2	0.935
595	3.93	34.15	0.74		700	3.80	34.24	0.53	7.2		27.23	85.0	1.029
795	3.66	34.29	0.40		800	3.67	34.30	0.40	5.5		27.29	79.2	1.118
994	3.22	-	0.57		1000	3.22	34.38	0.57	7.8		27.40	69.0	1.280
1188	2.87	34.46	0.64										

HMCS STE. THERESE; July 28, 1955; 1759 GCT; 49°10'N, 131°46.7'W; sounding, 1700 fm; wind, 260°, force 5; weather, fog in patches; sea, rough; air temperature, dry 58°, wet 56°; barometer, 1018.3 mb. 3

0	13.0	32.38	5.70	1.55	0	13.0	32.38	5.70	94.1	1.55	24.40	354.2	0.000
10	13.0	32.38	5.81	1.60	10	13.0	32.38	5.81	95.9	1.60	24.40	354.2	0.039
20	11.40	32.41	6.09	1.05	20	11.40	32.41	6.09	97.3	1.05	24.73	322.2	0.074
30	9.54	32.45	6.47	1.10	30	9.54	32.45	6.47	99.5	1.10	25.08	288.2	0.106
40	8.94	32.45	6.51	1.10	50	7.49	32.50	6.54	96.2	0.85	25.41	257.5	0.160
50	7.49	32.50	6.54	0.85	75	6.72	32.71	6.28	91.1	1.25	25.68	232.0	0.222
74	6.72	32.71	6.28	1.25	100	6.18	32.76	6.05	86.5	2.20	25.79	220.8	0.289
99	6.18	32.76	6.11	2.20	150	6.24	33.64	4.32	62.5	1.65	26.47	157.2	0.386
123	6.13	33.14	5.04	1.90	200	5.90	33.82	2.90	41.2	2.30	26.66	138.8	0.460
147	6.25	33.57	-	1.65	250	5.48	33.88	2.41	34.2	2.50	26.76	129.3	0.529
196	5.93	33.82	2.94	2.30	300	5.04	33.92	1.91	26.9	2.60	26.84	122.0	0.596
293	5.06	33.91	1.97	2.60	400	4.46	34.02	1.15	16.1	3.15	26.98	108.3	0.714
390	4.49	34.01	1.19	3.15	500	4.20	34.11	0.69	9.6	3.25	27.08	98.5	0.822
582	4.00	34.17	0.46	3.60	600	3.97	34.18	0.46	6.3	3.30	27.17	90.5	0.922
771	3.57	34.29	0.37	3.35	700	3.72	34.25	0.37	5.1	3.35	27.24	83.5	1.016
964	3.19	-	0.44u	2.80u	800	3.51	34.30	0.38	5.2	3.35	27.31	77.2	1.102
1156	2.82	34.44	0.38	3.45	1000	3.13	34.39	0.38	5.2	3.40	27.42	67.0	1.261

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

4 HMCS STE. THERESE; July 29, 1955; 0355 GCT; 49°09'N, 133°29'W; sounding, 1700 fm; wind, 270°, force 4; weather, rain showers; sea, rough; air temperature, dry 55°, wet 53°; barometer, 1016.9 mb.

0	12.4	32.53	6.01	1.80	0	12.4	32.45	6.01	98.2	1.80	24.58	337.2	0.000
10	12.37	32.46	5.96	0.77	10	12.37	32.46	5.96	97.1	0.75	24.59	336.0	0.034
20	12.36	32.50	5.95	0.70	20	12.36	32.50	5.95	96.9	0.70	24.60	334.5	0.067
30	9.87	32.57	6.60	1.15	30	9.87	32.58	6.60	102.0	1.10	25.11	286.2	0.098
40	8.68	32.65	6.54	1.40	50	7.69	32.67	6.58	97.5	1.45	25.52	247.5	0.152
49	7.69	32.62	6.60	1.45	75	6.87	32.74	6.33	92.2	1.10	25.68	231.8	0.212
74	6.87	32.74	6.33	1.15	100	6.44	32.76	6.34	91.4	1.30	25.76	225.2	0.270
98	6.49	32.76	6.34	-	150	5.94	33.07	5.49	78.4	1.85	26.07	195.0	0.376
123	6.14	32.79	6.29	1.40	200	5.89	33.75	3.74	53.6	1.85	26.60	143.5	0.462
147	5.94	33.03	5.60	1.85	250	5.20	33.83	2.52	35.7	2.30	26.74	130.8	0.532
196	5.92	33.75	3.80	1.85	300	4.70	33.89	2.18	30.6	2.50	26.88	118.0	0.597
292	4.71	33.89	2.23	2.50	400	4.30	33.98	1.52	21.1	2.80	26.97	109.3	0.715
389	4.34	33.96	1.58	2.60	500	4.08	34.08	1.03	14.2	3.00	27.08	99.5	0.825
583	3.86	34.15	0.74	3.10	600	3.83	34.16	0.73	10.0	3.15	27.16	91.2	0.926
783	3.47	34.29	0.46	3.20	700	3.62	34.22	0.58	8.0	3.20	27.25	84.7	1.024
980	3.09	-	0.60u	3.00u	800	3.42	34.28	0.45	6.2	3.20	27.30	79.5	1.109
1176	2.87	34.44	0.41	3.20	1000	3.06	34.37	0.44	6.0	3.20	27.40	68.0	1.269

5 HMCS STE. THERESE; July 29, 1955; 1235 GCT; 49°05'N, 135°15'W; sounding, 2000 fm; wind, 280°, force 5; weather, drizzle; sea, moderate; air temperature, dry 54°, wet 53°; barometer, 1019.5 mb.

0	12.2	32.55	5.45	1.50	0	12.2	32.54	5.45	88.5	1.50	24.67	328.0	0.000
10	12.14	32.57	5.81	0.40	10	12.14	32.56	5.81	94.4	0.40	24.70	325.0	0.033
20	12.15	32.50	-	0.90	20	12.15	32.57	6.02	101.1	0.75	24.71	324.3	0.065
30	9.08	32.58	6.19	-	30	9.08	32.58	6.19	94.5	0.85	25.24	274.0	0.095
40	8.11	32.76	6.42	0.85	50	7.48	32.82	6.42	94.2	1.00	25.66	233.8	0.146
50	7.48	32.83	6.42	1.00	75	6.59	32.94	6.34	91.7	1.00	25.88	213.5	0.202
75	6.59	32.93	6.34	1.00	100	6.09	32.95	6.09	87.0	1.50	25.95	206.0	0.255
100	6.09	32.95	6.09	1.50	150	5.99	33.46	4.05	58.0	1.90	26.36	166.8	0.349
125	5.81	33.26	5.12	1.75	200	5.67	33.84	3.61	51.5	2.05	26.70	134.8	0.426
150	5.99	33.46	4.05	1.90	250	5.13	33.88	2.94	41.5	2.10	26.80	125.5	0.492
200	5.67	33.84	3.61	-	300	4.62	33.91	2.25	31.4	2.15	26.87	118.7	0.555
300	4.62	33.91	2.25	2.15	400	4.24	34.01	1.43	20.1	2.50	27.00	107.0	0.671
400	4.24	34.01	1.43	2.50	500	4.25	34.10	0.97	13.5	2.65	27.07	100.4	0.779
600	3.77	34.17	0.64	2.75	600	3.77	34.17	0.64	8.8	2.75	27.18	89.7	0.879
800	3.34	34.29	0.46	-	700	3.55	34.23	0.50	6.9	2.85	27.24	83.2	0.973
1000	2.99	-	0.68u	-	800	3.34	34.29	0.46	6.2	2.90	27.31	77.0	1.058
1200	2.75	34.43	0.43	3.05	1000	2.99	34.37	0.44	6.0	3.00	27.42	67.5	1.214

6 HMCS STE. THERESE; July 30, 1955; 0032 GCT; 49°08'N, 137°26'W; sounding, 2300 fm; wind, 280°, force 6; weather, drizzle; sea, rough; air temperature, dry 55°, wet 55°; barometer, 1017.1 mb.

0	12.0	32.52	-	1.75	0	12.0	32.52	(5.93)	(99.6)	1.75	24.69	326.0	0.000
10	11.92	32.52	5.93	0.25	10	11.92	32.52	5.93	96.0	0.25	24.70	324.7	0.032
20	11.90	32.52	5.96	0.30	20	11.90	32.52	5.96	96.4	0.30	24.71	324.0	0.065
30	11.54	32.52	5.98	0.70	30	11.54	32.52	5.98	96.0	0.70	24.78	317.5	0.097
40	9.00	32.58	6.40	0.70	50	7.55	32.69	6.37	94.0	1.25	25.56	243.2	0.153
50	7.55	32.69	6.37	1.25	75	6.30	32.76	6.26	90.0	1.30	25.78	223.2	0.211
75	6.30	32.76	6.26	1.30	100	5.92	32.79	6.34	90.3	1.60	25.86	215.5	0.267
100	5.92	32.79	6.34	1.60	150	5.98	33.36	4.34	62.1	1.85	26.29	173.8	0.366
125	5.76	32.95	5.70	1.10	200	5.95	33.81	2.93	42.1	2.10	26.65	140.0	0.445
150	5.98	33.36	4.34	1.85	250	5.39	33.85	2.64	37.5	2.20	26.74	131.8	0.515
200	5.95	33.81	2.93	2.10	300	4.81	33.89	2.36	33.1	2.30	26.84	121.5	0.580
300	4.81	33.89	2.36	2.30	400	4.29	34.01	1.24	17.2	2.70	27.00	106.8	0.698
400	4.29	34.00	1.24	2.70	500	4.03	34.10	0.84	11.6	2.90	27.04	102.8	0.807
600	3.80	34.20	0.66	3.20	600	3.80	34.18	0.66	9.0	3.00	27.18	89.5	0.908
800	3.29	34.30	0.47	3.05	700	3.55	34.25	0.56	7.6	3.05	27.26	81.5	1.000
1000	2.94	34.39	-	3.20	800	3.29	34.30	0.47	6.4	3.10	27.32	75.5	1.086
1200	2.70	34.46	0.44	3.50	1000	2.94	34.40	0.45	6.0	3.20	27.44	65.0	1.239

OBSERVED					INTERPOLATED						COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	
HMCS STE. THERESE; July 30, 1955; 0855 GCT; 49°08'N, 139°11'W; sounding, 2000 fm; wind, 290°, force 6; weather, overcast; sea, rough; air temperature, dry 54°, wet 52°; barometer, 1017.5 mb.														7
0	11.2	32.72	6.47		0	11.2	32.72	6.47	103.0		24.98	298.0	0.000	
7	11.18	32.69	6.50		10	11.18	32.68	6.50	103.0		24.96	300.5	0.030	
15	11.17	32.67	6.50		20	11.17	32.68	6.52	104.0		24.97	299.8	0.060	
23	11.17	32.69	6.53		30	10.13	32.71	6.91	108.0		25.21	276.8	0.089	
31	9.79	32.72	6.93		50	8.00	32.77	6.94	103.0		25.58	241.5	0.141	
39	8.72	32.74	6.95		75	6.44	32.82	7.00	101.0		25.81	220.0	0.198	
60	7.14	32.79	6.93		100	5.82	32.84	6.72	95.5		25.90	211.5	0.253	
80	6.16	32.83	6.95		150	5.15	33.32	6.74	94.7		26.36	168.0	0.349	
101	5.77	32.84	6.74		200	4.68	33.77	3.91	54.7		26.75	130.0	0.424	
122	5.53	32.89	6.75		250	4.40	33.84	2.80	38.9		26.84	122.0	0.488	
164	4.94	33.51	4.86		300	4.20	33.91	2.07	28.7		26.92	114.7	0.550	
250	4.52	33.84	2.80		400	3.99	34.02	1.34	18.5		27.04	103.2	0.663	
336	4.10	33.93	1.71		500	3.80	34.11	0.90	12.3		27.12	95.0	0.766	
517	3.77	34.12	0.84		600	3.60	34.18	0.65	8.9		27.20	88.5	0.863	
698	3.45	34.25	0.54		700	3.41	34.24	0.54	7.5		27.26	82.0	0.953	
878	3.06	-	0.66u		800	3.21	34.29	0.51	6.9		27.32	76.2	1.039	
1062	2.83	34.41	0.46		1000	2.92	34.38	0.48	6.5		27.43	65.8	1.194	
HMCS STE. THERESE; July 30, 1955; 1755 GCT; 49°09.5'N, 141°03'W; sounding, 2300 fm; wind, 310°, force 4; weather, overcast, drizzle; sea, rough; air temperature, dry 50°, wet 50°; barometer, 1014.9 mb.														8
0	11.6	32.72	6.46	1.25	0	11.6	32.72	6.46	104.0	1.25	24.92	304.8	0.000	
10	11.58	32.72	6.46	0.90	10	11.58	32.72	6.46	104.0	0.90	24.93	303.5	0.030	
19	11.59	32.69	6.47	0.90	20	11.59	32.72	6.47	104.0	0.90	24.93	303.5	0.061	
28	11.50	32.71	6.45	0.85	30	11.50	32.72	6.45	104.0	0.85	24.94	302.5	0.091	
38	9.07	32.71	6.65	1.15	50	7.83	32.79	6.87	102.0	0.90	25.60	239.5	0.145	
47	7.96	32.79	6.87	0.90	75	6.60	32.83	6.82	98.7	1.15	25.79	221.8	0.203	
71	6.67	32.88	6.81	1.10	100	5.47	32.86	6.85	96.7	1.35	25.95	206.0	0.257	
96	5.50	32.86	6.87	1.35	150	5.12	33.35	5.88	82.4	1.70	26.38	165.5	0.351	
120	5.34	32.84	6.78	1.50	200	5.05	33.73	4.42	62.2	2.00	26.68	136.8	0.428	
144	5.14	33.31	6.01	1.15	250	4.72	33.81	3.36	47.0	2.15	26.79	126.8	0.494	
192	5.10	33.72	4.53	1.95	300	4.48	33.88	2.37	33.0	2.15	26.87	118.8	0.558	
288	4.50	33.86	2.52	2.15	400	4.19	34.00	1.11	15.3	2.55	27.00	106.3	0.674	
382	-	33.96	1.22	2.55	500	3.90	34.09	0.76	10.5	2.70	27.10	97.5	0.780	
569	3.70	34.15	0.67	2.55	600	3.63	34.17	0.66	9.0	2.75	27.18	89.0	0.879	
762	3.27	34.32	0.59	2.80	700	3.41	34.23	0.63	8.5	2.75	27.26	82.2	0.970	
954	2.95	-	0.66u	-	800	3.20	34.29	0.58	7.9	2.80	27.32	76.0	1.055	
1151	2.63	34.43	0.55	3.05	1000	2.90	34.38	0.56	7.6	2.95	27.43	66.0	1.210	
HMCS STE. THERESE; July 31, 1955; 0107 GCT; 50°08'N, 141°02'W; sounding, missing; wind, 310°, force 4; weather, overcast; sea, moderate; air temperature, dry 54°, wet 52°; barometer, 1014.5 mb.														9
0	10.9	32.69	6.34	1.10	0	10.9	32.66	6.34	101.0	1.10	25.00	296.8	0.000	
10	10.86	32.65	6.56	0.65	10	10.86	32.69	6.56	104.0	0.65	25.03	294.2	0.030	
20	10.25	32.71	6.72	0.50	20	10.25	32.70	6.72	105.0	0.45	25.14	283.2	0.058	
30	8.21	32.71	7.08	0.65	30	8.21	32.70	7.08	106.0	0.65	25.46	253.2	0.085	
40	7.48	32.74	6.82	0.85	50	6.66	32.77	7.06	103.0	1.35	25.74	226.8	0.133	
50	6.66	32.77	7.06	1.35	75	5.74	32.77	6.82	96.8	1.50	25.85	216.0	0.188	
75	5.74	32.77	6.82	1.50	100	5.22	32.84	6.78	95.1	1.55	25.96	224.8	0.242	
100	5.22	32.84	6.78	1.55	150	4.79	33.50	4.51	63.1	1.80	26.53	150.8	0.332	
125	4.88	33.00	6.29	1.70	200	4.58	33.81	2.87	39.9	2.25	26.80	125.2	0.402	
150	4.79	33.50	4.51	1.80	250	4.37	33.86	2.00	27.8	2.45	26.87	119.0	0.464	
200	4.58	33.81	2.87	2.30	300	4.17	33.91	1.48	20.4	2.55	26.93	113.5	0.523	
300	4.17	33.91	1.48	2.55	400	4.02	34.03	0.74	13.4	2.90	27.04	103.2	0.635	
400	4.02	34.03	0.97u	2.90	500	3.85	34.11	0.65	8.9	3.00	27.12	95.5	0.739	
600	3.68	34.20	0.49	3.00	600	3.68	34.19	0.49	6.7	3.00	27.19	88.5	0.835	
800	3.25	34.30	0.52	3.15	700	3.47	34.24	0.50	6.8	3.10	27.26	82.0	0.925	
1000	2.89	-	0.85u	3.15	800	3.25	34.30	0.52	7.0	3.15	27.32	76.0	1.035	
1200	2.60	34.44	0.54	-	1000	2.89	34.38	0.53	7.2	3.15	27.43	66.0	1.202	

POG NORPAC

10 HMCS STE. THERESE; July 31, 1955; 0808 GCT; 51°17'N, 141°05'W; sounding, 2156 fm; wind, 320°, force 4; weather, overcast; sea, moderate; air temperature, dry 52°, wet 50°; barometer, 1014.0 mb.

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m
0	10.4	32.77	6.63	1.30	0	10.4	32.74	6.63	104.0	1.25	25.14	283.0	0.000
10	10.37	32.74	6.71	0.70	10	10.37	32.74	6.71	105.0	0.70	25.16	281.8	0.028
20	10.24	32.74	6.79	0.90	20	10.24	32.74	6.79	106.0	0.90	25.18	280.0	0.056
30	8.54	32.74	7.13	0.90	30	8.54	32.74	7.13	107.0	0.90	25.44	254.5	0.083
40	7.79	32.76	7.07	0.60	50	7.57	32.76	7.03	104.0	1.10	25.60	238.8	0.132
50	7.57	32.76	7.03	1.15	75	5.91	32.77	6.62	94.3	1.30	25.83	217.7	0.190
75	5.91	32.77	6.62	1.35	100	5.13	32.81	6.96	97.3	1.45	25.96	206.0	0.244
100	5.13	32.81	6.96	1.45	150	4.97	33.59	3.89	54.5	2.15	26.59	145.5	0.332
125	4.84	33.15	5.63	2.20	200	4.96	33.82	2.41	33.8	2.60	26.77	128.2	0.402
150	4.97	33.58	3.89	2.20	250	4.53	33.86	1.99	27.0	2.65	26.86	120.5	0.465
200	4.96	33.82	2.41	2.60	300	4.14	33.89	1.62	22.3	2.70	26.92	114.8	0.524
300	4.14	33.89	1.62	2.60	400	4.08	34.01	1.09	15.0	2.80	27.02	105.0	0.638
400	4.08	34.00	1.09	2.80	500	3.90	34.10	0.73	10.0	2.85	27.10	96.5	0.743
600	3.71	34.18	0.56	2.95	600	3.71	34.18	0.56	7.6	2.90	27.18	88.8	0.840
800	3.36	34.32	0.54	3.20	700	3.53	34.24	0.56	7.6	2.95	27.26	82.2	0.930
1000	2.92	-	0.63u	2.80u	800	3.36	34.30	0.54	7.3	3.00	27.32	76.5	1.015
1200	2.68	34.46	0.58	3.20	1000	2.92	34.39	0.56	7.6	3.20	27.43	66.0	1.170

11 HMCS STE. THERESE; July 31, 1955; 1525 GCT; 52°17.5'N, 141°03'W; sounding, 2000 fm; wind, 330°, force 3; weather, cloudy; sea, rough; air temperature, dry 52°, wet 51.5°; barometer, 1015.0 mb.

0	11.0	32.69	6.45	-	0	11.0	32.68	6.45	103.0	(0.50)	25.00	297.2	0.000
10	10.75	32.67	6.56	0.50	10	10.75	32.68	6.56	104.0	0.50	25.04	293.0	0.030
20	10.62	32.71	6.52	0.15	20	10.62	32.71	6.52	101.0	0.10	25.08	288.2	0.059
30	8.30	32.74	6.96	0.15	30	8.30	32.74	6.96	104.0	0.10	25.48	251.2	0.086
40	7.20	32.79	6.95	0.60	50	6.02	32.78	6.96	99.4	0.65	25.82	218.2	0.132
50	6.02	32.76	6.96	0.65	75	4.92	32.81	6.42	89.3	0.75	25.98	203.8	0.185
75	4.92	32.81	-	-	100	4.58	33.08	5.82	80.6	1.15	26.23	180.0	0.234
100	4.58	33.08	5.82	1.15	150	4.70	33.75	2.60	36.4	1.65	26.74	131.5	0.313
125	4.75	33.60	3.87	1.65	200	4.35	33.86	1.79	24.8	2.05	26.87	119.0	0.376
150	4.70	33.75	2.60	1.65	250	4.28	33.93	1.23	17.1	2.50	26.94	113.0	0.434
200	4.35	33.86	1.79	2.10	300	4.20	33.99	0.93	12.8	2.85	26.99	108.0	0.492
300	4.20	33.98	0.93	2.90	400	3.94	34.08	0.73	10.0	3.00	27.09	98.2	0.598
400	3.94	34.08	0.73	3.00	500	3.80	34.15	0.60	8.3	3.00	27.16	92.0	0.697
600	3.61	34.20	0.47	3.00	600	3.61	34.20	0.47	6.6	3.00	27.22	86.5	0.791
800	3.23	34.30	0.44	3.20	700	3.44	34.26	0.45	6.1	3.10	27.28	80.5	0.879
1000	2.85	-	0.56	3.20	800	3.23	34.30	0.44	5.9	3.20	27.32	76.0	0.964
1200	2.61	34.43	0.64	3.20	1000	2.85	34.37	0.56	7.5	3.20	27.42	66.5	1.118

12 HMCS STE. THERESE; August 1, 1955; 0009 GCT; 52°20'N, 138°55.5'W; sounding, 2000 fm; wind, 315°, force 5; weather, overcast; sea, rough; air temperature, dry 53°, wet 50.5°; barometer, 1014.4 mb.

0	(12.0)	32.46	6.23	0.70	0	(12.0)	32.46	6.23	101.0	0.70	24.65	330.0	0.000
10	11.99	32.46	6.23	0.40	10	11.99	32.46	6.23	101.0	0.40	24.65	330.0	0.033
20	11.70	32.48	6.26	0.80	20	11.70	32.48	6.26	101.0	0.40	24.72	323.8	0.066
30	8.94	32.69	6.83	0.40	30	8.94	32.69	6.83	104.0	0.40	25.35	263.2	0.095
40	8.22	32.69	6.76	0.60	50	7.09	32.72	6.76	98.9	0.60	25.64	235.5	0.145
50	7.09	32.72	6.76	0.60	75	5.80	32.77	6.76	96.0	1.05	25.84	216.7	0.202
75	5.80	32.77	6.76	1.05	100	5.10	32.88	6.45	90.1	1.40	26.00	201.5	0.255
100	5.10	32.88	6.45	1.40	150	5.19	33.74	3.08	43.4	2.60	26.68	136.8	0.341
125	4.98	33.39	4.76	1.60	200	4.87	33.83	2.30	32.2	2.75	26.78	120.8	0.408
150	5.19	33.72	3.08	2.60	250	4.62	33.90	2.02	28.0	2.95	26.88	118.7	0.470
200	4.87	33.84	2.30	2.75	300	4.36	33.96	1.79	24.9	3.10	26.95	111.5	0.530
299	4.36	33.91	1.79	3.10	400	4.19	34.05	0.90	12.4	3.15	27.04	102.5	0.640
398	4.19	34.05	0.90	3.15	500	4.01	34.13	0.53	7.2	3.15	27.12	95.8	0.743
597	3.83	34.20	0.39	3.15	600	3.83	34.20	0.39	5.4	3.15	27.19	88.5	0.840
797	3.35	34.29	0.39	3.15	700	3.60	34.25	0.39	5.3	3.15	27.26	82.5	0.931
997	2.99	-	0.50u	2.75u	800	3.35	34.29	0.39	5.3	3.15	27.32	76.8	1.017
1197	2.67	34.44	0.45	3.15	1000	2.99	34.37	0.41	5.6	3.15	27.42	67.5	1.174

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 1, 1955; 0752, 0813 GCT; 52°16.5'N, 136°58'W; sounding, 1940 fm; wind, 340°, force 5; weather, cloudy; sea, rough; air temperature, dry 51°, wet 49°; barometer, 1013.5 mb. 13

0	11.7	32.34	6.34	1.00	0	11.7	32.31	6.34	105.0	1.00	24.62	333.5	0.000
10	11.70	32.31	6.66	0.45	10	11.70	32.31	6.66	107.0	0.45	24.62	332.8	0.033
20	11.69	32.31	6.65	0.30	20	11.69	32.31	6.65	107.0	0.30	24.62	332.8	0.067
30	8.69	32.38	6.85	0.70	30	8.69	32.38	6.85	103.0	0.70	25.14	283.0	0.097
40	6.97	32.46	6.82	0.65	50	6.46	32.47	6.84	98.5	1.10	25.52	246.5	0.150
50	6.46	32.45	6.84	1.10	75	6.32	32.50	6.80	97.4	1.20	25.56	242.8	0.212
75	6.32	32.50	6.80	0.75	100	6.01	32.71	6.80	96.8	1.30	25.77	223.5	0.271
100	6.01	32.71	6.80	1.30	150	6.56	33.17	4.45	64.0	1.35	26.06	195.2	0.376
124	6.31	32.83	6.00	1.05	200	6.40	33.55	2.86	41.3	1.60	26.38	165.5	0.468
149	6.56	33.14	4.50	1.35	250	6.13	33.70	2.53	36.5	1.70	26.54	150.5	0.548
198	6.40	33.55	2.87	1.60	300	5.87	33.83	2.32	33.2	1.85	26.67	138.0	0.623
298	5.88	33.82	2.34	1.85	400	5.16	33.97	1.68	23.7	2.50	26.86	119.5	0.756
					500	4.70	34.06	1.12	15.7	2.85	26.99	108.0	0.874
398	5.17	33.98	1.69	2.50	600	4.25	34.13	0.79	11.0	3.00	27.10	97.8	0.983
598	4.25	34.12	0.79	3.10	700	4.00	34.19	0.79	10.9	3.05	27.17	90.7	1.084
798	3.74	34.25	0.79	–	800	3.75	34.24	0.79	10.9	3.05	27.24	84.7	1.180
998	3.25	–	0.72	2.60u	1000	3.25	34.31	0.72	9.7	3.05	27.34	74.5	1.352
1198	2.87	34.39	0.57	3.00									

HMCS STE. THERESE; August 1, 1955; 1607 GCT; 52°18'N, 134°46'W; sounding, 1860 fm; wind, 330°, force 3; weather, cloudy; sea, rough; air temperature, dry 53°, wet 52°; barometer, 1015.5 mb. 14

0	12.2	32.31	6.40	0.05	0	12.2	32.26	6.40	104.0	0.05	24.41	352.8	0.000
10	12.13	32.26	6.09	0.05	10	12.13	32.26	6.09	98.6	0.05	24.42	352.0	0.035
20	11.97	32.29	6.47	0.05	20	11.97	32.29	6.47	105.0	0.05	24.52	342.0	0.070
30	9.09	32.46	6.85	0.50	30	9.09	32.46	6.85	104.0	0.50	25.14	282.8	0.101
39	8.11	32.57	6.87	0.50	50	7.18	32.62	6.74	98.7	0.50	25.55	244.2	0.151
48	7.18	32.62	6.76	0.35	75	6.07	32.71	6.58	94.1	0.85	25.76	224.0	0.212
72	6.07	32.71	6.67	0.80	100	5.61	32.81	5.74	81.2	1.15	25.89	212.0	0.268
96	5.61	32.76	5.88	0.50	150	6.36	33.63	3.58	51.9	1.40	26.45	158.8	0.362
119	5.88	33.15	5.07	1.40	200	5.33	33.74	3.47	49.1	1.45	26.66	138.2	0.437
143	6.36	33.58	3.58	1.40	250	5.20	33.84	2.63	37.1	2.25	26.76	129.5	0.506
191	5.36	33.74	3.59	1.35	300	4.98	33.91	1.83	25.7	2.75	26.84	121.5	0.570
286	5.08	33.89	2.00	2.70	400	4.22	34.03	1.32	18.3	3.00	27.02	104.8	0.687
380	4.29	33.96	1.37	1.35	500	4.05	34.12	1.04	14.4	3.10	27.10	96.5	0.793
568	3.92	34.17	0.85	2.20	600	3.86	34.20	0.78	10.8	3.15	27.19	88.8	0.890
760	3.64	34.29	0.45	–	700	3.73	34.26	0.56	7.6	3.20	27.26	82.5	0.981
953	3.18	–	0.62u	–	800	3.54	34.31	0.48	6.5	3.20	27.31	77.0	1.068
1148	2.86	34.41	0.50	3.20	1000	3.10	34.40	0.48	6.5	3.20	27.43	66.0	1.234

HMCS STE. THERESE; August 2, 1955; 0027, 0105 GCT; 52°24.5'N, 132°33.6'W; sounding, 1600 fm; wind, 290°, force 4; weather, overcast; sea, moderate; air temperature, dry 61°, wet 58°; barometer, 1019.5 mb. 15

0	13.3	32.05	6.37	0.70	0	13.3	32.04	6.37	106.0	0.70	24.07	385.0	0.000
10	12.63	32.03	6.55	0.40	10	12.63	32.04	6.55	107.0	0.40	24.20	372.8	0.038
20	12.04	32.10	6.62	0.40	20	12.04	32.10	6.62	107.0	0.40	24.28	364.5	0.075
30	10.64	32.15	5.86	0.65	30	10.64	32.15	5.86	92.1	0.65	24.64	330.5	0.109
40	9.86	32.21	5.92	0.05u	50	8.93	32.15	6.11	92.5	0.50	24.94	302.0	0.173
50	8.93	32.14	6.11	0.50	75	8.34	32.45	5.27	78.9	1.00	25.26	272.5	0.244
75	8.34	32.45	5.27	1.00	100	7.33	32.71	4.89	71.8	1.45	25.60	240.0	0.309
					150	6.52	33.31	4.64	67.1	2.05	26.17	186.0	0.418
100	7.33	32.72	4.89	1.45	200	6.07	33.74	3.57	51.5	2.10	26.58	146.5	0.502
125	6.59	33.05	4.57	2.05	250	5.71	33.82	2.92	41.8	2.65	26.68	136.8	0.575
150	6.52	33.31	4.64	2.05	300	5.37	33.89	2.30	32.5	3.00	26.78	127.5	0.643
200	6.07	33.75	3.57	2.10	400	4.82	34.00	1.99	27.9	3.05	26.92	114.0	0.769
299	5.37	33.89	2.30	3.00	500	4.53	34.09	1.33	18.6	3.10	27.04	103.5	0.882
398	4.81	33.98	1.99	2.80	600	4.27	34.16	0.72	9.9	3.15	27.12	95.5	0.987
595	4.28	34.13	0.72	3.05	700	4.00	34.22	0.45	6.2	3.15	27.19	89.0	1.086
790	3.76	34.27	0.44	3.30	800	3.75	34.27	0.48	6.6	3.20	27.26	82.0	1.178
986	3.30	–	1.15u	–	1000	3.29	34.35	0.49	6.7	3.25	27.36	72.0	1.347
1180	2.84	34.43	0.57	3.10									

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
16	HMCS STE. THERESE; August 2, 1955; 0759 GCT; 53°23'N, 133°45.5'W; sounding, 1355 fm; wind, 225°, force 1; weather, overcast; sea, moderate; air temperature, dry 54°, wet 52°; barometer, 1022.0 mb.												
0	12.8	32.17	6.38	0.45	0	12.8	32.12	6.38	105.0	0.50	24.24	369.5	0.000
10	12.80	32.12	6.42	0.05	10	12.80	32.12	6.42	105.0	0.10	24.24	369.5	0.037
20	12.25	32.12	6.56	0.05	20	12.25	32.12	6.56	107.0	0.10	24.34	360.0	0.073
30	9.54	32.28	6.93	0.05	30	9.54	32.28	6.93	107.0	0.20	24.94	302.0	0.106
40	8.07	32.33	6.77	0.90	50	7.34	32.39	6.70	98.0	0.60	25.36	262.5	0.165
50	7.34	32.40	6.70	0.60	75	6.41	32.60	6.46	93.1	0.60	25.63	236.5	0.228
75	6.41	32.60	6.46	0.55	100	6.06	32.86	5.91	84.6	1.00	25.88	212.8	0.285
100	6.06	32.86	5.91	1.00	150	6.3	33.43	4.32	62.4	1.65	26.30	172.8	0.382
125	6.18	33.14	5.11	1.35	200	5.89	33.82	3.01	43.2	2.00	26.66	139.0	0.461
150	6.3	33.43	4.32	1.65	250	5.41	33.87	2.49	35.2	2.45	26.76	129.5	0.530
199	5.89	33.82	3.02	1.90	300	4.95	33.91	1.99	28.0	3.00	26.90	115.5	0.593
298	4.95	33.91	2.02	3.00	400	4.56	34.02	1.18	16.4	3.15	26.98	109.2	0.710
396	4.57	34.00	1.19	3.20	500	4.39	34.10	0.78	10.9	3.20	27.06	101.0	0.820
589	4.22	34.17	0.58	3.15	600	4.20	34.17	0.57	7.9	3.20	27.13	94.0	0.922
778	3.77	34.27	0.47	3.20	700	3.95	34.23	0.47	6.5	3.20	27.20	87.2	1.018
988	3.20	-	0.56u	2.85u	800	3.70	34.28	0.47	6.4	3.20	27.27	80.8	1.110
1188	2.83	34.43	0.53	3.20	1000	3.19	34.36	0.50	6.8	3.20	27.40	69.5	1.273
17	HMCS STE. THERESE; August 2, 1955; 1441 GCT; 54°15'N, 134°40'W; sounding, 1400 fm; wind, 250°, force 3; weather, overcast, drizzle; sea, moderate; air temperature, dry 52°, wet 51°; barometer, 1022.5 mb.												
0	11.8	31.86	6.62	1.00	0	11.8	31.85	6.62	106.0	1.00	24.20	372.8	0.000
10	11.75	31.85	6.71	0.70	10	11.75	31.85	6.71	108.0	0.70	24.22	371.2	0.037
20	11.12	31.98	6.67	0.70	20	11.12	31.98	6.67	106.0	0.70	24.43	350.8	0.073
30	9.55	32.33	6.51	1.30	30	9.55	32.33	6.51	100.0	1.30	24.97	299.5	0.106
40	8.74	32.38	6.09	1.25	50	8.36	32.38	5.96	89.3	1.15	25.22	276.0	0.163
50	8.36	32.38	5.96	1.15	75	7.05	32.64	4.93	72.1	1.60	25.58	241.8	0.228
75	7.05	32.64	4.93	1.60	100	6.28	32.89	4.94	71.0	1.90	25.88	233.2	0.286
100	6.28	32.89	4.94	1.90	150	6.42	33.57	3.59	52.0	2.45	26.39	164.2	0.381
125	6.40	33.24	4.37	2.40	200	5.90	33.81	2.77	39.6	2.50	26.65	139.5	0.458
149	6.42	33.55	3.63	2.10	250	5.47	33.86	2.32	33.0	2.55	26.74	131.5	0.528
198	5.92	33.81	2.79	2.50	300	5.07	33.91	1.93	27.1	2.60	26.83	122.8	0.594
297	5.09	33.91	1.94	2.60	400	4.70	33.98	1.28	17.9	2.95	26.92	113.8	0.716
396	4.70	33.98	1.30	2.95	500	4.42	34.05	0.86	12.0	3.00	27.02	105.8	0.831
594	4.20	34.13	0.60	3.05	600	4.20	34.13	0.60	8.4	3.05	27.10	97.5	0.938
794	3.77	34.25	0.46	3.35	700	3.98	34.19	0.50	6.9	3.10	27.17	90.5	1.045
993	3.27	-	0.49	3.20	800	3.77	34.24	0.46	6.3	3.15	27.24	84.5	1.140
1192	2.94	34.39	0.50	3.60	1000	3.27	34.32	0.50	6.8	3.20	27.34	74.0	1.313
18	HMCS STE. THERESE; August 2, 1955; 2217 GCT; 54°17'N, 136°37'W; sounding, 1500 fm; wind, 230°, force 1; weather, overcast; sea, moderate; air temperature, dry 55°, wet 52°; barometer, 1022.0 mb.												
0	12.4	32.31	6.42	0.45	0	12.4	32.30	6.42	105.0	0.45	24.44	349.5	0.000
10	12.13	32.28	6.49	0.30	10	12.13	32.30	6.49	105.0	0.30	24.50	344.0	0.035
20	10.30	32.31	6.57	0.70	20	10.30	32.31	6.57	103.0	0.70	24.84	312.5	0.068
30	8.03	32.38	6.73	0.85	30	8.03	32.38	6.73	99.8	0.85	25.24	273.5	0.097
40	7.59	32.43	5.81	1.30	50	7.21	32.50	5.83	85.4	1.15	25.45	254.0	0.150
50	7.21	32.50	5.83	1.15	75	6.40	32.69	5.27	76.0	1.15	25.70	229.5	0.210
75	6.40	32.69	5.27	1.15	100	6.08	32.95	4.74	67.7	1.20	25.94	226.5	0.266
100	6.08	32.95	4.74	1.20	150	6.27	33.60	3.27	47.2	1.65	26.44	160.5	0.358
125	6.09	33.26	4.55	1.55	200	5.97	33.82	2.72	39.1	1.90	26.66	139.5	0.434
150	6.27	33.60	3.27	1.65	250	5.57	33.88	2.26	32.3	2.30	26.75	130.5	0.503
199	5.97	33.82	2.73	1.90	300	5.15	33.93	1.83	25.8	2.50	26.84	122.0	0.567
297	5.15	33.93	1.84	2.50	400	4.73	34.03	1.23	17.2	2.55	26.96	110.2	0.686
396	4.73	33.96	1.25	2.55	500	4.40	34.12	0.86	12.0	2.60	27.07	100.2	0.797
596	4.05	34.17	0.57	2.50	600	4.05	34.17	0.57	7.9	2.65	27.14	93.0	0.898
795	3.57	34.27	0.44	3.55u	700	3.81	34.23	0.45	6.1	2.75	27.22	86.5	0.994
994	3.08	-	0.64u	3.45u	800	3.58	34.27	0.45	6.1	2.90	27.28	80.5	1.084
1193	2.74	34.43	0.47	3.10	1000	3.08	34.35	0.46	6.3	3.15	27.39	70.0	1.248

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 3, 1955; 0552, 0622 GCT; 54°18'N, 138°42'W; sounding, 1840 fm; wind, 245°, force 4; weather, overcast; sea, moderate; air temperature, dry 51°, wet 49°; barometer, 1019.5 mb. 19

0	11.5	32.62	6.55	1.30	0	11.5	32.58	6.55	105.0	1.30	24.83	313.2	0.000
10	11.41	32.58	6.24	0.80	10	11.41	32.58	6.24	99.8	0.85	24.84	312.0	0.031
20	10.74	32.58	6.87	0.50	20	10.74	32.58	6.87	109.0	0.50	24.97	300.0	0.062
30	7.96	32.69	-	0.90	30	7.96	32.69	6.98	104.0	0.95	25.49	250.0	0.089
40	7.43	32.69	7.09	0.90	50	6.41	32.72	7.12	103.0	0.95	25.72	228.0	0.137
49	6.41	32.72	7.12	0.90	75	4.78	32.84	6.86	96.1	1.65	26.02	200.0	0.191
74	4.78	32.84	6.86	1.60	100	4.95	33.32	4.81	67.4	1.95	26.38	166.0	0.237
98	4.95	33.32	4.97	1.85	150	5.10	33.86	2.26	31.9	2.20	26.78	127.5	0.312
122	5.27	33.75	2.96	2.10	200	4.72	33.89	1.77	24.8	2.25	26.85	120.8	0.374
146	5.10	33.86	2.30	2.20	250	4.52	33.95	1.43	19.9	2.70	26.93	113.5	0.433
195	4.73	33.89	1.80	2.20	300	4.32	34.00	1.12	15.5	3.00	26.98	108.0	0.491
291	4.34	34.00	1.14	2.90	400	4.11	34.09	0.75	10.3	2.90	27.08	98.8	0.597
					500	3.93	34.15	0.66	9.1	2.95	27.14	93.5	0.698
388	4.13	34.06	0.76	2.80	600	3.75	34.20	0.58	8.0	3.00	27.20	88.0	0.792
587	3.77	34.18	0.58	2.90	700	3.56	34.25	0.48	6.6	3.05	27.26	82.0	0.882
787	3.39	34.29	0.41	3.05	800	3.38	34.29	(0.43)	(5.8)	3.10	27.30	77.5	0.968
987	2.99	-	0.62u	2.90u	1000	2.99	34.35			3.20	27.40	69.2	1.127
1186	2.67	34.49	1.02u	3.20									

HMCS STE. THERESE; August 3, 1955; 1417 GCT; 54°15'N, 140°38'W; sounding, 2000 fm; wind, 255°, force 4; weather, overcast; sea, moderate; air temperature, dry 52°, wet 51°; barometer, 1019.5 mb. 20

0	11.0	32.65	6.49	1.25	0	11.0	32.64	6.49	103.0	1.25	24.97	300.2	0.000
10	10.98	32.64	6.52	0.90	10	10.98	32.64	6.52	103.0	0.90	24.98	299.5	0.030
20	9.94	32.64	6.82	0.90	20	9.94	32.64	6.82	106.0	0.90	25.14	282.8	0.059
30	7.97	32.65	7.02	1.00	30	7.97	32.65	7.02	105.0	0.95	25.46	253.5	0.086
40	7.39	32.69	-	1.05	50	6.73	32.69	7.09	103.0	1.25	25.66	233.2	0.134
49	6.73	32.69	7.09	1.25	75	5.05	32.76	6.87	96.2	1.45	25.92	209.5	0.190
73	5.05	32.76	6.91	1.45	100	4.77	32.98	5.93	82.3	1.50	26.06	196.0	0.242
98	4.77	32.95	6.15	1.40	150	5.21	33.72	2.97	41.8	1.70	26.66	139.0	0.326
122	5.10	33.39	4.22	1.70	200	4.78	33.82	2.15	30.1	2.20	26.79	126.0	0.394
146	5.21	33.70	3.02	1.60	250	4.55	33.90	1.47	20.0	2.75	26.88	118.0	0.456
195	4.78	33.82	2.19	2.05	300	4.38	33.96	1.12	15.6	3.00	26.95	111.8	0.514
291	4.38	33.96	1.13	3.00	400	4.20	34.06	0.88	12.2	3.20	27.04	102.5	0.625
388	4.23	34.06	0.91	-	500	3.99	34.14	0.64	8.8	3.25	27.13	94.2	0.728
584	3.78	34.18	0.50	3.30	600	3.76	34.20	0.50	6.9	3.30	27.20	87.8	0.823
781	3.40	34.30	0.47	3.70	700	3.57	34.26	0.47	6.4	3.35	27.28	81.5	0.912
978	2.99	-	0.56	3.50	800	3.37	34.30	0.48	6.5	3.40	27.32	76.2	0.998
1168	2.73	34.43	0.60	3.50	1000	2.96	34.38	0.56	7.5	3.50	27.43	66.0	1.153

HMCS STE. THERESE; August 3, 1955; 2057 GCT; 54°15'N, 142°41'W; sounding, 2040 fm; wind, 235°, force 5; weather, overcast, drizzle; sea, rough; air temperature, dry 52°, wet 50°; barometer, 1919.5 mb. 21

0	11.0	32.67	6.61	0.00	0	11.0	32.60	6.61	105.0	0.00	24.94	303.2	0.000
10	11.00	32.58	6.67	0.00	10	11.00	32.60	6.67	106.0	0.00	24.94	303.2	0.030
20	10.49	32.60	6.73	0.00	20	10.49	32.60	6.73	106.0	0.00	25.02	294.5	0.060
30	7.44	32.65	7.17	0.00	30	7.44	32.65	7.17	105.0	0.00	25.52	246.5	0.087
40	6.82	32.67	7.01	1.20	50	6.01	32.71	7.00	99.7	0.80	25.77	223.5	0.134
49	6.01	32.71	7.00	0.80	75	4.98	32.79	6.66	93.0	1.20	25.95	206.0	0.188
73	4.98	32.79	6.72	1.20	100	5.06	33.14	5.16	72.3	2.00	26.22	181.0	0.237
98	5.06	33.14	5.33	2.00	150	5.51	33.81	2.38	33.9	2.00	26.70	135.2	0.317
123	5.48	33.65	3.18	1.75	200	5.15	33.86	2.00	28.3	2.55	26.78	127.8	0.383
147	5.52	33.79	2.41	2.00	250	4.84	33.90	1.59	22.3	2.60	26.84	121.5	0.447
196	5.16	33.86	2.04	2.55	300	4.56	33.95	1.22	17.0	2.60	26.92	114.5	0.507
294	4.58	33.94	1.24	2.40	400	4.27	34.05	0.77	10.7	2.60	27.02	104.2	0.619
392	4.26	34.05	0.78	2.60	500	4.00	34.13	0.53	7.2	2.70	27.12	95.5	0.723
588	3.80	34.17	0.40	2.80	600	3.78	34.20	0.40	5.5	2.80	27.20	87.8	0.820
782	3.38	34.29	0.38	3.30	700	3.55	34.25	0.37	5.0	3.05	27.26	81.8	0.910
976	3.04	-	0.53u	3.30	800	3.34	34.30	0.39	5.3	3.30	27.32	76.0	0.996
1172	2.72	34.44	0.46	-	1000	3.00	34.38	0.42	5.8	3.30	27.42	67.2	1.151

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	$\delta_{T_3}^{-5}$ 10^{-5} cm^3/g	ΔD dyn. m
22	HMCS STE. THERESE; August 4, 1955; 0623 GCT; 54°19'N, 144°41'W; sounding, 2190 fm; wind, 220°, force 4; weather, drizzle; sea, rough; air temperature, dry 52°, wet 50°; barometer, 1014.5 mb.												
0	10.1	32.74	6.66	1.30	0	10.1	32.74	6.66	104.0	1.30	25.20	278.0	0.000
10	10.11	32.74	6.66	0.90	10	10.11	32.74	6.66	104.0	0.90	25.20	278.0	0.028
20	9.58	32.76	6.87	0.50	20	9.58	32.76	6.87	106.0	0.50	25.30	268.0	0.055
30	7.08	32.79	7.08	0.40	30	7.08	32.79	7.08	103.0	0.40	25.70	230.2	0.080
40	6.41	32.81	7.00	0.30	50	6.14	32.81	7.02	100.0	0.80	25.84	217.0	0.125
50	6.14	32.81	7.02	0.80	75	5.12	32.91	6.99	97.7	1.30	26.03	198.8	0.177
75	5.12	32.91	6.99	1.30	100	4.53	32.96	6.58	90.9	1.40	26.14	188.2	0.226
100	4.53	32.96	6.58	1.40	150	5.23	33.75	2.98	42.0	2.40	26.68	137.2	0.309
125	4.67	33.31	5.11	1.50	200	4.88	33.87	2.02	28.3	2.55	26.82	124.5	0.374
149	5.23	33.72	3.02	2.40	250	4.50	33.92	1.57	21.8	2.65	26.90	116.5	0.436
198	4.89	33.87	2.04	2.30	300	4.17	33.97	1.22	16.9	2.70	26.98	109.0	0.494
296	4.17	33.96	1.24	2.70	400	3.84	34.07	0.76	10.4	2.70	27.08	99.0	0.601
394	3.83	34.01	0.76	2.70	500	3.75	34.15	0.63	8.6	2.80	27.16	91.5	0.701
592	3.67	34.20	0.60	2.95	600	3.66	34.21	0.60	8.4	2.95	27.22	86.2	0.793
789	3.20	34.30	-	3.30	700	3.41	34.26	0.61	8.4	3.05	27.28	80.5	0.882
988	2.90	-	0.83u	2.55u	800	3.20	34.31	0.62	8.5	3.10	27.34	74.5	0.966
1186	2.66	34.46	0.63	3.10	1000	2.90	34.39	0.63	8.6	3.15	27.43	66.0	1.118
23	HMCS STE. THERESE; August 4, 1955; 1439 GCT; 54°17'N, 146°37'W; sounding, 2000 fm; wind, 210°, force 3; weather, rain; sea, moderate; air temperature, dry 52°, wet 51°; barometer, 1012.5 mb.												
0	10.4	32.71	6.04	1.85	0	10.4	32.71	6.04	94.6	1.85	25.12	285.2	0.000
10	10.29	32.76	6.18	1.45	10	10.29	32.76	6.18	96.8	1.45	25.18	279.5	0.028
20	9.53	32.88	6.37	1.90	20	9.53	32.88	6.37	98.3	1.90	25.40	258.5	0.055
30	6.48	32.98	6.65	1.90	30	6.48	32.98	6.65	96.1	1.90	25.92	209.5	0.089
40	5.59	32.98	6.62	1.90	50	5.08	33.01	6.62	92.6	2.40	26.11	190.5	0.129
50	5.08	33.01	6.62	2.40	75	4.08	33.12	6.26	85.6	2.45	26.31	172.0	0.174
75	4.08	33.12	6.26	2.30	100	3.86	33.48	3.97	54.4	2.80	26.62	143.2	0.215
100	3.86	33.48	3.97	2.85	150	3.88	33.86	1.52	20.9	3.30	26.92	114.8	0.280
125	4.01	33.75	1.90	3.40	200	3.91	33.91	0.92	12.6	3.35	26.94	112.0	0.337
150	3.88	33.86	1.52	3.30	250	3.89	33.98	0.69	9.5	3.40	27.01	106.0	0.392
199	3.91	33.91	0.92	-	300	3.85	34.04	0.56	7.7	3.45	27.06	101.5	0.445
298	3.85	34.05	0.56	3.60	400	3.67	34.13	0.52	7.0	3.50	27.15	92.5	0.544
396	3.66	34.12	0.52	-	500	3.50	34.20	0.48	6.5	3.50	27.22	86.0	0.637
595	3.34	34.25	0.44	3.40	600	3.32	34.25	0.44	5.9	3.55	27.28	80.2	0.724
795	3.00	34.34	0.45	-	700	3.18	34.31	0.45	6.1	3.55	27.32	75.8	0.806
994	-	-	0.62	3.60	800	3.00	34.35	0.46	6.2	3.60	27.39	70.0	0.884
1193	2.49	34.48	0.64	3.60	1000	2.75	34.42	0.62	8.3	3.60	27.46	63.2	1.028
24	HMCS STE. THERESE; August 4, 1955; 2136, 2211 GCT; 53°06'N, 146°34'W; sounding, 2158 fm; wind, 190°, force 6; weather, rain; sea, rough; air temperature, dry 52°, wet 52°; barometer, 1013.0 mb.												
0	10.3	32.87	5.96	1.10	0	10.3	32.87	5.96	93.0	1.10	25.27	271.0	0.000
10	10.26	32.86	6.11	0.15	10	10.26	32.86	6.11	96.0	0.15	25.27	271.0	0.027
20	9.06	32.88	6.12	0.30	20	9.06	32.88	6.12	93.5	0.30	25.48	251.5	0.053
29	6.56	32.96	6.06	0.65	30	6.56	32.96	6.16	89.1	0.65	25.90	211.0	0.076
38	5.58	32.98	6.56	1.30	50	5.18	33.00	6.53	91.5	1.40	26.10	192.0	0.116
48	5.23	33.00	6.56	1.40	75	4.46	33.03	6.21	85.8	1.60	26.20	182.5	0.163
71	4.53	33.03	6.35	1.60	100	4.00	33.22	5.02	68.6	1.95	26.40	164.0	0.207
95	4.00	33.15	5.26	2.10	150	3.90	33.80	1.65	22.5	2.40	26.86	120.0	0.279
119	3.97	33.51	3.35	2.35	200	3.85	33.88	1.12	15.3	2.80	26.94	113.2	0.338
143	3.9	33.79	1.71	2.40	250	3.80	33.96	0.96	13.2	3.00	27.02	104.8	0.393
191	3.9	33.87	1.14	3.30	300	3.72	34.03	0.85	11.6	3.15	27.07	100.0	0.446
286	-	33.87	1.24	3.15	400	3.61	34.13	0.75	10.2	3.30	27.16	92.0	0.544
					500	3.47	34.19	0.74	10.0	3.40	27.22	86.0	0.637
384	3.63	34.12	0.75	3.40	600	3.30	34.25	0.71	9.6	3.45	27.28	80.0	0.724
583	3.31	34.24	0.72	-	700	3.12	34.29	0.59	8.0	3.50	27.34	75.0	0.806
781	3.00	34.34	0.49	3.65	800	2.99	34.34	0.49	6.7	3.55	27.39	70.0	0.885
977	2.76	-	0.68u	3.50u	1000	2.72	34.40	0.52	7.1	3.60	27.44	64.0	1.029
1162	2.54	34.44	0.57	3.65									

OBSERVED					INTERPOLATED						COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	

HMCS STE. THERESE; August 5, 1955; 0903 GCT; 51°51'N, 146°37'W; sounding, 2300 fm; wind, 250°, force 5; weather, drizzle; sea, rough; air temperature, dry 51°, wet 49°; barometer, 1006.5 mb. 25

0	9.9	32.90	6.28		0	9.9	32.83	6.28	97.6		25.30	268.0	0.000
10	9.87	32.86	6.60		10	9.87	32.84	6.60	102.0		25.31	267.2	0.027
20	9.85	32.84	6.58		20	9.85	32.84	6.58	102.0		25.31	267.2	0.054
30	9.11	32.83	6.74		30	9.11	32.84	6.74	103.0		25.44	255.5	0.080
40	6.00	32.84	7.12		50	5.50	32.84	7.09	100.0		25.93	208.0	0.126
50	5.50	32.84	7.09		75	5.00	32.86	6.99	98.3		26.00	201.5	0.178
75	5.00	32.86	6.99		100	4.11	33.07	6.06	82.8		26.26	176.5	0.226
99	4.10	33.07	6.19		150	4.12	33.74	2.83	39.0		26.80	126.0	0.303
123	4.01	33.41	4.45		200	4.00	33.87	1.76	24.2		26.90	115.5	0.363
148	4.12	33.71	2.90		250	3.91	33.94	1.01	13.8		26.98	108.8	0.420
196	4.00	33.86	1.79		300	3.82	34.00	0.73	10.0		27.03	104.0	0.474
295	3.85	34.01	0.74		400	3.64	34.10	0.63	8.5		27.12	94.5	0.576
393	3.64	34.10	0.63		500	3.49	34.17	0.57	7.8		27.20	88.0	0.672
590	3.36	34.24	0.50		600	3.33	34.23	0.52	7.0		27.26	82.0	0.760
790	3.06	34.32	0.60		700	3.20	34.28	0.57	7.7		27.32	76.7	0.844
990	2.77	-	0.74u		800	3.05	34.33	0.62	8.3		27.37	71.8	0.923
1190	2.52	34.46	0.64		1000	2.74	34.40	0.62	8.4		27.45	64.0	1.072

HMCS STE. THERESE; August 5, 1955; 1736 GCT; 50°38'N, 146°47'W; sounding, 1900 fm; wind, 225°, force 2; weather, rain; sea, moderate; air temperature, dry 51°, wet 50°; barometer, 1008.0 mb. 26

0	10.5	32.69	6.48	1.15	0	10.5	32.69	6.48	102.0	1.15	25.09	288.0	0.000
10	10.42	32.69	6.53	1.05	10	10.42	32.69	6.53	102.0	1.05	25.10	286.8	0.029
20	10.42	32.69	6.62	1.20	20	10.42	32.70	6.62	104.0	1.15	25.11	286.2	0.057
30	10.33	32.69	6.53	1.10	30	10.33	32.70	6.53	102.0	1.30	25.13	284.5	0.086
40	7.58	32.79	7.13	1.50	50	6.66	32.81	7.13	104.0	1.40	25.76	224.0	0.137
50	6.66	32.81	7.13	1.40	75	5.61	32.81	7.01	99.1	1.40	25.89	211.8	0.191
74	5.61	32.81	7.01	1.40	100	5.27	32.86	6.98	97.8	1.40	25.98	204.0	0.244
98	5.31	32.86	6.99	1.50	150	4.29	33.40	5.15	71.0	1.45	26.50	153.5	0.334
122	4.59	32.93	6.76	-	200	4.29	33.81	2.96	40.9	1.85	26.83	122.5	0.404
146	4.29	33.33	5.28	1.45	250	4.12	33.89	2.16	29.7	2.25	26.92	116.5	0.465
196	4.30	33.81	3.31	-	300	3.97	33.95	1.40	19.2	2.50	27.02	105.2	0.521
292	3.99	33.93	1.47	2.50	400	3.80	34.05	1.02	13.9	2.70	27.07	100.0	0.627
388	3.82	34.05	1.03	2.45	500	3.68	34.14	0.88	12.1	2.80	27.16	92.0	0.727
584	3.57	34.19	0.77	3.05	600	3.52	34.20	0.76	10.4	2.90	27.23	85.2	0.821
784	3.18	34.31	0.56	2.80	700	3.33	34.25	0.65	8.8	2.95	27.28	80.0	0.910
984	2.86	-	0.79u	3.10	800	3.13	34.30	0.58	7.9	3.00	27.36	74.5	0.993
1184	2.62	34.44	0.75	3.40	1000	2.85	34.38	0.64	8.7	3.10	27.43	66.0	1.145

HMCS STE. THERESE; August 6, 1955; 0206 GCT; 49°25'N, 146°37'W; sounding, 2400 fm; wind, 320°, force 3; weather, drizzle; sea, moderate; air temperature, dry 52°, wet 50°; barometer, 1007.5 mb. 27

0	11.5	32.43	6.39	1.15	0	11.5	32.43	6.39	102.0	1.15	24.72	323.8	0.000
10	11.18	32.58	6.45	1.00	10	11.18	32.58	6.45	103.0	1.00	24.88	307.5	0.032
20	11.17	32.60	6.29	0.90	20	11.17	32.60	6.29	100.0	0.90	24.90	305.8	0.062
30	9.46	32.69	6.80	1.05	30	9.46	32.69	6.80	105.0	1.05	25.26	272.0	0.091
40	7.32	32.79	7.07	1.05	50	6.58	32.79	7.02	101.0	1.15	25.76	223.5	0.141
49	6.66	32.83	7.02	1.15	75	5.75	32.80	6.95	98.9	1.40	25.88	213.5	0.196
74	5.75	32.79	6.95	1.40	100	5.40	32.88	6.55	92.4	1.45	25.98	203.5	0.249
98	5.45	32.88	6.57	1.15	150	4.38	33.51	5.42	74.9	1.65	26.59	145.5	0.337
122	4.89	33.05	6.24	1.45	200	4.38	33.78	3.38	46.8	2.35	26.80	125.2	0.406
146	4.38	33.48	5.58	1.65	250	4.23	33.87	2.44	33.6	2.70	26.89	117.2	0.468
194	4.38	33.77	3.45	2.35	300	4.10	33.94	1.88	25.9	2.80	26.96	110.8	0.526
288	4.13	33.93	1.97	2.90	400	3.90	34.05	1.23	16.9	2.85	27.06	100.8	0.635
384	3.93	34.03	1.28	2.75	500	3.71	34.13	0.78	10.7	2.90	27.15	92.5	0.736
578	3.56	34.19	0.63	2.90	600	3.50	34.20	0.63	8.5	2.95	27.22	85.8	0.830
776	3.16	34.31	0.58	3.10	700	3.30	34.26	0.59	8.0	3.00	27.29	79.2	0.916
972	2.86	-	0.70u	3.05	800	3.10	34.31	0.58	8.0	3.05	27.35	73.5	1.000
1172	2.59	34.46	0.55	3.45	1000	2.82	34.40	0.56	7.7	3.15	27.45	64.0	1.150

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

28 HMCS STE. THERESE; August 6, 1955; 0943 GCT; 48°15'N, 146°40'W; sounding, 2680 fm; wind, 290°, force 4; weather, overcast; sea, moderate; air temperature, dry 52°, wet 51°; barometer, 1013.5 mb.

0	11.4	32.65	6.44	1.10	0	11.4	32.64	6.44	103.0	1.10	24.89	307.2	0.000
10	11.18	32.64	6.48	0.65	10	11.18	32.64	6.48	103.0	0.65	24.94	303.5	0.030
20	11.18	32.62	6.29	0.65	20	11.18	32.64	6.29	100.0	0.65	24.94	303.5	0.061
29	11.04	32.64	6.43	1.05	30	11.04	32.66	6.51	103.0	1.05	24.97	299.8	0.091
39	7.06	32.86	6.96	1.20	50	6.51	32.89	6.92	99.8	1.25	25.85	216.0	0.142
48	6.55	32.88	6.93	1.25	75	6.25	32.93	6.89	99.0	1.25	25.90	210.5	0.196
72	6.29	32.93	6.89	1.25	100	5.69	32.93	6.93	98.3	1.15	25.98	203.8	0.249
95	5.75	32.93	6.96	1.15	150	5.18	33.67	5.86	82.5	1.70	26.63	142.0	0.336
119	5.34	33.03	6.82	1.15	200	4.90	33.78	4.46	62.5	2.05	26.74	131.2	0.405
142	5.21	33.55	6.04	1.60	250	4.63	33.87	3.38	47.0	2.40	26.84	121.5	0.469
188	4.97	33.74	4.71	1.95	300	4.40	33.93	2.55	35.4	2.85	26.92	114.5	0.530
281	4.49	33.91	2.70	2.80	400	4.08	34.04	1.67	23.0	3.05	27.04	102.5	0.641
375	4.14	34.00	1.86	3.05	500	3.81	34.13	1.12	15.3	3.10	27.14	94.0	0.744
563	3.65	34.13	0.85	3.15	600	3.60	34.20	0.78	10.7	3.20	27.22	86.2	0.839
757	3.31	34.29	0.64	3.50	700	3.40	34.25	0.66	9.0	3.40	27.27	81.2	0.927
953	2.94	-	0.88u	-	800	3.22	34.30	0.63	8.8	3.50	27.33	75.5	1.012
1150	2.68	34.43	0.59	3.55	1000	2.89	34.38	0.61	8.4	3.50	27.43	66.0	1.166

29 HMCS STE. THERESE; August 6, 1955; 2006 GCT; 48°15'N, 148°39'W; sounding, 2560 fm; wind, 290°, force 5; weather, overcast; sea, rough; air temperature, dry 54°, wet 50°; barometer, 1020.7 mb.

0	11.5	32.67	6.16	1.30	0	11.5	32.65	6.16	98.7	1.30	24.88	308.0	0.000
10	11.49	32.65	6.16	1.05	10	11.49	32.65	6.16	98.7	1.05	24.88	308.0	0.031
20	11.49	32.65	6.16	1.25	20	11.49	32.65	6.16	98.7	1.25	24.88	308.0	0.062
30	10.86	32.67	6.34	1.45	30	10.86	32.67	6.34	101.0	1.45	25.00	296.5	0.092
40	7.07	32.86	6.85	1.65	50	6.39	32.90	6.84	98.7	1.85	25.88	212.8	0.144
50	6.39	32.90	6.84	1.85	75	6.16	32.91	6.64	95.2	1.80	25.92	208.5	0.196
75	6.16	32.91	6.64	-	100	5.55	33.00	6.56	93.0	1.80	26.06	196.2	0.248
100	5.55	33.00	6.56	1.80	150	5.50	33.67	5.51	78.2	1.90	26.58	146.0	0.335
125	5.61	33.34	6.19	1.60	200	5.22	33.79	4.45	62.6	1.90	26.71	134.0	0.406
150	5.50	33.67	5.51	1.90	250	4.88	33.86	3.49	49.0	2.40	26.82	124.2	0.471
200	5.22	33.79	4.45	1.90	300	4.50	33.93	2.54	35.4	2.85	26.91	115.5	0.533
300	4.50	33.91	2.54	2.85	400	4.14	34.04	1.60	22.1	3.00	27.04	103.2	0.646
400	4.14	34.03	1.60	3.00	500	3.90	34.12	1.03	14.1	3.20	27.12	94.8	0.749
600	3.64	34.20	0.74	3.55	600	3.64	34.20	0.74	10.1	3.35	27.21	86.8	0.846
800	3.24	34.31	0.62	3.45	700	3.45	34.25	0.68	9.3	3.40	27.26	81.8	0.925
998	2.93	-	0.74u	3.55	800	3.24	34.30	0.62	8.3	3.45	27.32	76.0	1.021
1198	2.64	34.43	0.60	3.60	1000	2.92	34.38	0.61	8.4	3.55	27.43	66.0	1.175

30 HMCS STE. THERESE; August 7, 1955; 0712 GCT; 48°15'N, 151°20'W; sounding, missing; wind, 290°, force 4; weather, overcast; sea, rough; air temperature, dry 52°, wet 49°; barometer, 1025.2 mb.

0	11.9	32.65	6.00		0	11.9	32.64	6.00	97.1		24.80	315.8	0.000
10	11.87	32.64	6.26		10	11.87	32.64	6.26	101.0		24.80	315.8	0.032
20	11.88	32.62	6.21		20	11.88	32.64	6.21	101.0		24.80	315.8	0.063
30	9.68	32.79	6.62		30	9.68	32.79	6.62	102.0		25.30	268.0	0.092
40	6.89	32.83	6.87		50	6.20	32.84	6.87	98.4		25.85	216.0	0.141
50	6.20	32.84	6.87		75	6.23	32.91	6.61	94.7		25.89	211.8	0.194
75	6.23	32.91	6.61		100	5.64	32.92	6.85	97.0		25.98	204.0	0.247
100	5.64	32.91	6.85		150	5.72	33.79	5.39	76.3		26.66	139.5	0.334
125	5.85	33.53			200	5.19	33.86	3.94	55.6		26.78	128.0	0.402
150	5.72	33.79			250	4.80	33.91	3.11	43.6		26.86	120.0	0.465
199	5.19	33.86	3.97		300	4.42	33.94	2.33	32.3		26.92	114.0	0.524
297	4.45	33.93	2.36		400	4.06	34.05	1.50	20.8		27.04	102.8	0.636
395	4.08	34.03	1.52		500	3.80	35.13	1.05	14.4		27.14	93.8	0.738
593	3.58	34.19	0.76		600	3.57	34.19	0.76	10.4		27.22	86.2	0.834
790	3.21	34.31	0.65		700	3.39	34.25	0.71	9.6		27.28	80.5	0.922
990	2.91	-	0.69		800	3.20	34.30	0.66	8.9		27.33	75.2	1.006
1190	2.63	34.43	0.66		1000	2.90	34.38	0.69	9.4		27.43	66.0	1.161

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 7, 1955; 1738 GCT; 48°11'N, 153°37'W; sounding, 2600 fm; wind, 235°, force 4; weather, overcast; sea, moderate; air temperature, dry 52°, wet 51°; barometer, 1026.0 mb. 31

0	11.7	32.60	6.40	1.55	0	11.7	32.60	6.40	103.0	1.55	24.80	315.5	0.000
9	11.68	32.62	6.29	1.55	10	11.68	32.63	6.30	101.0	1.55	24.84	312.0	0.031
18	11.68	32.65	6.35	1.40	20	11.68	32.64	6.37	103.0	1.40	24.84	312.0	0.063
27	11.07	32.64	6.40	1.50	30	10.08	32.64	6.57	102.0	1.50	25.12	285.5	0.092
36	8.18	32.76	6.86	1.80	50	6.70	32.88	6.92	100.0	1.85	25.82	219.2	0.143
44	6.85	32.88	6.96	1.85	75	6.00	32.90	6.74	96.0	1.85	25.92	209.0	0.196
65	6.13	32.90	6.80	-	100	5.70	32.96	6.68	94.8	1.85	26.00	201.2	0.246
87	5.8	32.91	6.71	1.85	150	4.90	33.50	5.60	78.4	2.00	26.52	152.0	0.338
108	5.61	33.00	6.68	2.25	200	4.75	33.80	4.31	60.3	2.50	26.78	128.0	0.409
127	4.9	33.22	6.34	1.80	250	4.48	33.88	3.37	46.9	2.75	26.88	118.8	0.472
172	4.90	33.76	4.80	2.30	300	4.22	33.94	2.61	34.0	2.85	26.94	112.0	0.532
254	4.47	33.82	3.29	2.80	400	3.98	34.04	1.51	20.8	3.00	27.05	102.0	0.642
338	4.08	33.96	2.04	2.90	500	3.79	34.12	0.94	12.9	3.10	27.14	94.0	0.754
505	3.79	34.12	0.91	3.55	600	3.57	34.19	0.73	9.9	3.20	27.22	86.5	0.840
670	3.41	34.24	0.66	3.40	700	3.36	34.25	0.66	9.1	3.30	27.28	80.0	0.929
829	3.11	-	0.87u	3.30	800	3.14	34.30	0.65	8.9	3.40	27.34	74.5	1.012
975	2.85	34.37	0.64	3.60	1000	(2.80)	(34.38)	(0.64)	(8.7)	(3.55)	(27.43)	(66.0)	(1.166)

HMCS STE. THERESE; August 8, 1955; 0221, 0305 GCT; 49°30'N, 153°35'W; sounding, 2800 fm; wind, 240°, force 6; weather, overcast, fog; sea, rough; air temperature, dry 56°, wet 55°; barometer, 1021.0 mb. 32

0	11.0	32.60	6.24	1.30	0	11.0	32.58	6.24	98.9	1.30	24.92	304.2	0.000
9	10.94	32.58	6.35	1.45	10	10.94	32.58	6.36	101.0	1.25	24.94	302.8	0.083
19	10.94	32.58	6.30	1.20	20	10.94	32.58	6.30	100.0	1.20	24.94	302.8	0.061
28	10.66	32.58	6.30	0.70	30	10.66	32.60	6.38	101.0	0.70	24.99	298.0	0.091
38	7.10	32.71	6.75	1.80	50	5.83	32.76	7.50	107.0	1.95	25.83	218.0	0.142
47	5.88	32.76	7.58	1.95	75	5.10	32.78	6.77	94.8	1.95	25.93	208.2	0.196
71	5.18	32.78	6.80	1.95	100	4.45	32.91	6.44	89.6	2.65	26.10	192.0	0.246
96	4.53	32.83	6.65	2.60	150	4.17	33.77	3.47	47.8	3.05	26.82	124.0	0.326
121	4.06	33.41	4.94	2.85	200	4.05	33.86	2.55	35.1	3.10	26.90	116.2	0.388
146	4.18	33.76	3.55	3.05	250	3.99	33.94	1.94	26.6	3.10	26.97	109.5	0.445
196	4.05	33.86	2.60	3.10	300	3.91	34.00	1.33	18.3	3.15	27.03	104.2	0.500
296	3.92	33.96	1.35	3.10	400	3.72	34.10	0.81	11.0	3.15	27.12	94.8	0.602
					500	3.59	34.17	0.75	10.2	3.15	27.20	88.2	0.698
396	3.73	34.10	0.82	3.30	600	3.43	34.23	0.69	9.4	3.20	27.25	83.2	0.787
596	3.43	34.22	0.71	3.25	700	3.27	34.28	0.63	8.5	3.25	27.31	77.2	0.873
796	3.08	34.32	0.57	3.45	800	3.08	34.33	0.57	7.7	3.25	27.38	71.5	0.953
996	2.79	-	0.63	3.15	1000	2.79	34.40	0.63	8.4	3.30	27.45	64.0	1.099
1192	2.56	34.46	0.72	3.45									

HMCS STE. THERESE; August 8, 1955; 1202, 1237 GCT; 50°39'N, 153°25'W; sounding, 2640 fm; wind, 240°, force 4; weather, cloudy; sea, moderate; air temperature, dry 52°, wet 51°; barometer, 1018.0 mb. 33

0	10.7	32.52	7.13	0.90	0	10.7	32.50	7.13	113.0	0.90	24.90	305.8	0.000
10	10.67	32.48	7.01	0.85	10	10.67	32.50	7.01	111.0	0.85	24.92	304.8	0.030
20	10.65	32.50	6.79	1.00	20	10.65	32.50	6.79	107.0	1.00	24.92	304.8	0.061
30	8.63	32.64	6.48	1.25	30	8.63	32.64	6.48	97.8	1.25	25.36	262.8	0.089
40	6.57	32.76	6.39	1.45	50	5.77	32.78	6.34	90.1	1.25	25.86	215.0	0.137
50	5.77	32.78	6.34	1.25	75	4.91	32.82	7.08	98.4	1.85	25.98	203.0	0.190
75	4.91	32.83	7.08	1.85	100	4.16	32.85	6.80	93.7	2.50	26.09	192.8	0.240
99	4.16	32.88	6.89	1.50	150	4.11	33.78	2.62	36.0	2.95	26.83	123.0	0.320
123	4.00	33.50	-	-	200	4.01	33.92	1.23	16.9	3.00	26.95	111.8	0.378
148	4.11	33.77	2.68	2.95	250	3.93	33.96	1.03	14.1	3.00	27.00	106.5	0.434
196	4.02	33.91	1.24	3.00	300	3.87	34.01	0.90	12.3	3.00	27.04	103.5	0.489
					400	3.68	34.10	0.73	9.9	3.05	27.13	94.2	0.590
296	3.87	34.01	0.96	3.00	500	3.50	34.18	0.65	8.8	3.15	27.21	86.8	0.684
396	3.68	34.10	0.74	3.05	600	3.35	34.24	0.57	7.8	3.30	27.28	80.8	0.773
592	3.37	34.24	0.58	3.30	700	3.20	34.29	0.57	7.7	3.40	27.32	76.0	0.856
792	3.04	34.32	0.57	3.50	800	3.03	34.33	0.58	7.8	3.45	27.37	71.8	0.936
990	2.75	34.39	0.72	3.70	1000	2.71	34.40	0.72	9.6	3.55	27.46	63.5	1.082
1190	2.49	34.46	0.77	3.50									

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

34 HMCS STE. THERESE; August 8, 1955; 1955 GCT; 51°48'N, 153°20'W; sounding, 2360 fm; wind, 240°, force 6; weather, cloudy; sea, rough; air temperature, dry 52°, wet 50°; barometer, 1018.6 mb.

0	10.3	32.58	6.57	1.60	0	10.3	32.54	6.57	103.0	1.60	25.01	296.0	0.000
10	10.28	32.55	6.66	1.15	10	10.28	32.54	6.66	104.0	1.15	25.02	296.0	0.030
20	10.27	32.53	6.60	0.90	20	10.27	32.54	6.60	103.0	0.90	25.02	295.2	0.059
30	10.24	32.53	6.64	0.95	30	10.24	32.54	6.64	104.0	0.95	25.02	295.2	0.089
40	6.82	32.72	7.35	1.50	50	5.97	32.79	7.30	104.0	1.55	25.84	216.8	0.140
50	5.97	32.79	7.30	1.55	75	4.82	32.83	6.21	86.3	1.65	26.00	201.8	0.192
75	4.82	32.83	6.21	1.65	100	3.86	32.95	5.99	81.6	2.00	26.20	182.8	0.242
99	3.86	32.96	6.43	2.00	150	4.07	33.72	2.41	33.1	2.80	26.78	127.0	0.321
123	3.86	33.38	4.17	2.75	200	4.05	33.89	1.14	15.7	3.25	26.92	114.5	0.381
148	4.07	33.69	2.47	2.80	250	3.98	33.96	0.83	11.4	3.30	26.98	108.0	0.438
196	4.05	33.89	1.16	3.30	300	3.90	34.02	0.64	8.7	3.35	27.04	103.0	0.492
296	3.90	34.01	0.64	3.35	400	3.69	34.12	0.40	5.5	3.35	27.14	93.2	0.594
395	3.69	34.12	0.40	3.35	500	3.50	34.19	0.44	5.9	3.40	27.22	86.5	0.686
595	3.33	34.25	0.46	3.65	600	3.30	34.25	0.47	6.4	3.40	27.28	80.5	0.775
798	2.97	34.36	0.52	3.30	700	3.12	34.30	0.49	6.6	3.45	27.34	74.5	0.856
998	2.70	34.37	0.88	3.50	800	2.95	34.35	0.53	7.1	3.45	27.40	69.0	0.934
1198	2.47	34.48	0.88	3.40	1000	2.70	34.42	0.88	12.0	3.50	27.47	62.2	1.076

35 HMCS STE. THERESE; August 9, 1955; 0404 GCT; 52°54'N, 153°38'W; sounding, 2520 fm; wind, 250°, force 5; weather, cloudy; sea, rough; air temperature, dry 53°, wet 50°; barometer, 1007.5 mb.

0	10.7	32.74	6.55	1.75	0	10.7	32.24	6.55	103.0	1.75	24.71	324.0	0.000
10	10.62	32.69	6.56	1.10	10	10.62	32.69	6.56	104.0	1.10	25.06	291.0	0.031
20	10.62	32.69	6.60	1.15	20	10.62	32.69	6.60	104.0	1.10	25.06	291.0	0.060
30	10.17	32.71	7.02	0.55	30	10.17	32.71	7.02	110.0	0.55	25.16	281.0	0.088
40	7.52	32.79	6.99	1.90	50	5.86	32.84	7.21	103.0	1.90	25.89	212.0	0.138
50	5.86	32.84	7.21	1.45	75	4.02	33.00	6.52	88.9	1.95	26.22	181.0	0.187
74	4.02	32.98	6.52	1.95	100	3.80	33.44	3.64	49.5	2.50	26.59	145.8	0.229
98	3.79	33.45	3.83	2.50	150	4.17	33.90	1.06	14.9	3.20	26.92	114.0	0.295
121	4.05	33.74	2.12	3.10	200	4.07	33.98	0.58	8.0	3.30	27.00	106.8	0.350
146	4.17	33.89	1.11	3.20	250	4.00	34.04	0.56	7.7	3.35	27.05	102.5	0.403
194	4.06	33.98	0.58	3.45	300	3.91	34.08	0.55	7.5	3.40	27.09	98.0	0.454
291	3.95	34.08	0.54	3.55	400	3.70	34.15	0.54	7.3	3.45	27.17	90.8	0.551
389	3.74	34.15	0.55	3.35	500	3.52	34.21	0.49	6.7	3.50	27.23	85.0	0.643
587	3.37	34.25	0.46	3.70	600	3.35	34.25	0.47	6.4	3.55	27.28	80.0	0.729
787	3.02	34.34	0.55	3.40	700	3.20	34.30	0.50	6.8	3.60	27.33	75.5	0.811
989	2.70	34.41	0.57	3.30	800	3.01	34.34	0.55	7.4	3.65	27.38	70.5	0.890
1183	2.47	34.46	0.86	-	1000	2.69	34.41	0.59	8.0	(3.70)	27.46	62.5	1.035

36 HMCS STE. THERESE; August 9, 1955; 1424 GCT; 54°26'N, 153°51'W; sounding, 2520 fm; wind, 350°, force 3; weather, cloudy; sea, rough; air temperature, dry 53°, wet 50°; barometer, 1009.0 mb.

0	11.6	32.15	6.32	0.35	0	11.6	32.14	6.32	101.0	0.35	24.48	346.5	0.000
10	11.46	32.14	6.34	0.35	10	11.46	32.14	6.34	101.0	0.35	24.50	344.0	0.034
20	11.48	32.14	6.37	0.15	20	11.48	32.14	6.37	102.0	0.15	24.50	344.0	0.069
30	8.52	32.45	6.85	0.70	30	8.52	32.45	6.85	103.0	0.70	25.23	275.0	0.100
40	6.03	32.48	5.95	1.15	50	6.16	32.78	6.09	87.2	1.15	25.81	220.0	0.149
49	6.16	32.78	6.07	1.10	75	5.50	32.88	6.42	91.2	1.50	25.96	204.8	0.202
73	5.54	32.88	6.52	1.50	100	4.98	33.15	5.09	71.3	1.70	26.24	178.5	0.252
97	4.93	33.15	5.23	1.70	150	5.33	33.70	2.82	39.9	2.40	26.63	141.8	0.332
121	5.33	33.43	3.66	1.90	200	4.90	33.82	2.49	34.9	2.70	26.77	128.0	0.401
145	5.38	33.65	2.84	2.40	250	4.64	33.90	1.55	21.5	3.00	26.87	119.2	0.464
194	4.95	33.81	2.56	2.70	300	4.40	33.96	1.11	15.4	3.15	26.94	112.0	0.522
290	4.43	33.94	1.14	3.30	400	4.04	34.06	0.75	10.3	3.25	27.06	101.0	0.633
388	4.09	34.06	0.77	3.25	500	3.82	34.13	0.58	8.0	3.30	27.14	94.0	0.735
587	3.67	34.19	0.52	3.30	600	3.62	34.19	0.52	7.0	3.30	27.21	87.0	0.831
788	3.27	34.31	0.46	3.60	700	3.43	34.25	0.48	6.5	3.35	27.27	81.2	0.920
988	2.94	34.35	0.60	3.45	800	3.23	34.29	0.47	6.4	3.35	27.32	76.0	1.004
1183	2.65	34.43	0.60	3.45	1000	2.92	34.37	0.60	8.1	3.45	27.42	67.5	1.160

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 16, 1955; 0439 GCT; 54°26'N, 158°07'W; sounding, 1000 fm; wind, 240°, force 5; weather, fog in patches; sea, rough; air temperature, dry 52°, wet 52°; barometer, 1008.2 mb. 37

0	11.2	32.22	6.61	1.10	0	11.2	32.17	6.61	106.0	1.10	24.56	338.5	0.000
10	11.03	32.15	7.00	0.85	10	11.03	32.17	7.00	112.0	0.85	24.59	335.5	0.034
20	11.03	32.17	6.96	0.65	20	11.03	32.17	6.96	111.0	0.65	24.59	335.5	0.067
30	10.44	32.31	6.81	1.00	30	10.44	32.31	6.81	106.0	1.00	24.92	314.5	0.100
40	7.56	32.74	7.18	1.25	50	5.93	32.83	6.90	98.2	1.35	25.88	213.5	0.152
50	5.93	32.84	6.90	1.35	75	4.55	32.98	6.63	91.6	1.95	26.16	186.5	0.202
75	4.55	32.98	6.63	1.95	100	3.78	33.10	6.21	84.5	2.00	26.32	170.8	0.248
100	3.78	33.10	6.21	2.00	150	4.13	33.64	2.83	38.9	2.30	26.71	134.0	0.325
124	3.95	33.40	4.57	2.30	200	4.10	33.89	0.99	13.6	3.40	26.99	108.0	0.387
148	4.13	33.64	2.90	2.80	250	4.04	34.00	0.59	8.2	3.55	27.02	105.5	0.440
197	4.10	33.89	1.01	3.40	300	4.00	34.03	0.45	6.2	3.60	27.04	103.5	0.494
296	4.00	34.03	0.44	3.60	400	3.83	34.12	0.56	7.7	3.30	27.13	94.5	0.597
395	3.88	34.10	0.56	3.30	500	3.65	34.18	0.54	7.3	3.10	27.20	88.0	0.691
597	3.48	34.24	0.52	3.05	600	3.47	34.24	0.52	7.0	3.05	27.26	82.0	0.781
796	3.15	34.32	0.46	3.55	700	3.30	34.28	0.48	6.5	3.15	27.31	77.2	0.865
986	2.87	-	0.57	3.40	800	3.14	34.32	0.46	6.2	3.25	27.36	72.5	0.946
1151	2.63	34.43	0.60	3.45	1000	2.87	34.38	0.58	7.8	3.40	27.43	66.0	1.097

HMCS STE. THERESE; August 16, 1955; 1038, 1121 GCT; 53°49'N, 159°32'W; sounding, 2056 fm; wind, 245°, force 5; weather, overcast; sea, rough; air temperature, dry 52°, wet 52°; barometer, 1008.5 mb. 38

0	11.3	32.36	6.35	0.80	0	11.3	32.34	6.35	101.0	0.80	24.67	328.0	0.000
10	11.16	32.34	6.43	0.75	10	11.16	32.34	6.43	102.0	0.75	24.71	323.2	0.033
20	11.10	32.31	6.43	0.85	20	11.10	32.34	6.43	102.0	0.85	24.71	322.5	0.065
30	6.93	32.76	7.00	1.55	30	6.93	32.76	7.00	102.0	1.55	25.70	230.5	0.092
40	5.64	32.84	7.07	1.65	50	4.76	32.91	7.12	98.7	1.95	26.07	195.0	0.135
49	4.67	32.91	7.14	1.95	75	4.04	33.04	6.67	91.0	2.30	26.25	178.0	0.182
73	4.04	33.03	6.67	2.30	100	3.77	33.27	5.01	68.1	3.25	26.46	158.0	0.225
98	3.77	33.27	5.22	3.25	150	4.13	33.89	1.12	15.4	3.45	26.92	114.8	0.294
					200	4.05	33.97	0.56	7.7	3.55	26.98	108.0	0.350
122	3.91	33.67	2.60	3.30	250	3.99	34.03	0.45	6.2	3.55	27.04	103.5	0.404
146	4.13	33.88	1.16	3.45	300	3.90	34.09	0.41	5.7	3.55	27.10	97.8	0.455
196	4.07	33.96	0.57	3.55	400	3.80	34.17	0.41	5.7	3.30	27.17	90.2	0.551
293	3.91	34.08	0.41	3.55	500	3.51	34.23	0.39	5.3	3.25	27.24	84.0	0.642
392	3.71	34.17	0.41	3.30	600	3.32	34.29	0.39	5.3	3.30	27.31	77.0	0.726
593	3.34	34.29	0.38	3.30	700	3.19	34.33	0.39	5.3	3.40	27.36	74.8	0.805
793	3.03	34.37	0.39	-	800	3.02	34.37	0.40	5.4	3.50	27.40	68.5	0.881
993	2.74	-	0.46	3.65	1000	2.72	34.43	0.47	6.3	3.65	27.47	62.0	1.022
1192	2.48	34.48	0.63	-									

HMCS STE. THERESE; August 16, 1955; 1949 GCT; 53°13'N, 160°53'W; sounding, 3400 fm; wind, 280°, force 3; weather, cloudy; sea, rough; air temperature, dry 50°, wet 49°; barometer, 1012.7 mb. 39

0	10.9	32.41	6.42	0.35	0	10.9	32.38	6.42	102.0	0.35	24.78	318.0	0.000
10	10.82	32.38	6.37	0.45	10	10.82	32.38	6.37	101.0	0.45	24.79	316.5	0.032
20	10.78	32.38	6.40	0.40	20	10.78	32.38	6.40	104.4	0.40	24.80	315.8	0.063
29	10.71	32.40	6.37	0.30	30	10.71	32.40	6.46	102.0	0.30	24.83	313.0	0.095
38	6.16	32.65	6.82	1.00	50	4.92	32.81	6.68	93.0	1.30	25.98	204.0	0.146
48	4.92	32.78	6.74	1.30	75	3.80	33.10	5.87	79.8	2.05	26.32	171.2	0.193
72	3.80	33.03	5.92	2.05	100	3.85	33.47	3.69	50.5	2.85	26.61	144.0	0.234
96	3.81	33.41	3.99	2.85	150	4.10	33.93	0.95	13.1	3.50	26.95	112.0	0.299
120	4.00	33.69	2.13	2.90	200	4.03	34.00	0.57	7.8	3.65	27.01	106.0	0.353
144	4.11	33.88	0.96	3.50	250	4.00	34.06	0.57	7.8	3.65	27.06	100.5	0.406
192	4.05	34.00	0.57	-	300	3.91	34.11	0.56	7.7	3.55	27.11	96.0	0.456
287	3.97	34.08	0.58	-	400	3.71	34.19	0.54	7.3	3.40	27.20	88.0	0.550
381	3.75	34.15	0.53	3.40	500	3.50	34.25	0.60	8.2	3.40	27.26	81.8	0.640
570	3.37	34.29	0.65	3.50	600	3.30	34.29	0.63	8.5	3.45	27.32	76.0	0.723
768	3.00	34.36	0.50	3.50	700	3.12	34.33	0.56	7.6	3.50	27.37	72.0	0.801
966	2.68	34.43	0.68	3.55	800	2.95	34.37	0.53	7.1	3.50	27.42	67.0	0.876
1160	2.45	34.48	1.00	3.45	1000	2.64	34.43	0.75	10.0	3.55	27.49	60.0	1.013

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

40 HMCS STE. THERESE; August 17, 1955; 0248, 0321 GCT; 52°04'N, 160°44'W; sounding, 2550 fm; wind, 310°, force 5; weather, cloudy; sea, rough; air temperature, dry 52°, wet 48°; barometer, 1016.0 mb.

0	10.6	32.31	6.62	0.50	0	10.6	32.24	6.62	104.0	0.50	24.73	322.0	0.000
10	10.5	32.24	6.61	0.25	10	10.5	32.24	6.61	104.0	0.25	24.74	322.0	0.032
20	10.50	32.24	5.96	0.20	20	10.50	32.24	5.96	93.3	0.20	24.74	321.0	0.064
30	10.42	32.28	4.60	0.35	30	10.42	32.28	4.60	72.0	0.35	24.78	317.5	0.096
40	6.45	32.58	6.74	1.35	50	4.83	32.69	7.08	98.3	1.40	25.89	212.2	0.149
50	4.83	32.69	7.08	1.40	75	4.30	32.74	6.39	87.6	1.55	25.99	202.8	0.201
75	4.30	32.74	6.39	1.55	100	3.74	33.06	5.68	77.1	1.75	26.30	173.5	0.285
100	3.74	33.07	5.68	1.75	150	4.14	33.80	2.14	29.4	3.40	26.84	122.0	0.324
124	4.02	33.58	2.70	2.45	200	4.00	33.89	1.31	18.0	3.05	26.93	113.8	0.383
148	4.13	33.79	2.18	3.40	250	3.97	33.96	0.93	12.8	2.80	26.98	108.0	0.439
					300	3.90	34.02	0.73	10.0	2.70	27.04	102.5	0.494
197	4.01	33.89	1.32	3.05	400	3.65	34.11	0.54	7.3	2.85	27.14	94.0	0.595
296	3.92	34.03	0.73	2.70	500	3.50	34.19	0.50	6.8	3.05	27.22	86.0	0.688
394	3.67	34.10	0.55	2.85	600	3.37	34.25	0.45	6.1	3.15	27.28	80.0	0.777
594	3.37	34.24	0.47	3.50	700	3.20	34.30	0.36	4.8	3.25	27.33	75.0	0.858
793	3.04	34.34	0.27	3.35	800	3.02	34.34	0.29	3.9	3.35	27.38	71.0	0.938
992	2.74	-	0.74u	3.35	1000	2.71	34.41	0.37	5.3	3.45	27.46	62.5	1.083
1192	2.50	34.46	0.52	3.50									

41 HMCS STE. THERESE; August 17, 1955; 1154 GCT; 50°50'N, 160°59'W; sounding, 2650 fm; wind, 330°, force 3; weather, partly cloudy; sea, rough; air temperature, dry 51°, wet 48°; barometer, 1020.5 mb.

0	11.0	32.38	6.40	1.00	0	11.0	32.36	6.40	102.0	1.00	24.76	320.0	0.000
10	10.96	32.36	6.44	0.90	10	10.96	32.36	6.44	102.0	1.00	24.76	319.0	0.032
20	10.92	32.36	6.52	1.05	20	10.92	32.36	6.52	103.0	1.00	24.77	318.5	0.064
30	9.29	32.62	6.62	1.20	30	9.29	32.62	6.62	101.0	1.20	25.22	275.5	0.094
40	7.34	32.71	6.79	1.40	50	5.89	32.74	7.08	101.0	1.50	25.81	220.0	0.143
50	5.89	32.74	7.08	1.50	75	4.93	32.76	7.01	97.5	1.50	25.93	208.0	0.196
75	4.93	32.76	7.01	1.45	100	4.31	32.88	6.63	91.1	1.70	26.10	192.0	0.248
100	4.31	32.88	6.63	1.70	150	4.14	33.81	1.91	26.3	2.75	26.85	120.5	0.327
125	4.10	33.57	3.16	2.60	200	3.97	33.90	1.27	17.4	2.95	26.94	112.0	0.386
149	4.14	33.81	1.95	2.75	250	3.93	33.97	0.91	12.4	3.10	27.00	106.5	0.441
198	3.97	33.88	1.28	2.95	300	3.90	34.03	0.73	10.0	3.25	27.05	102.0	0.495
293	3.90	34.01	0.73	3.25	400	3.72	34.12	0.65	8.9	3.20	27.14	93.5	0.596
392	3.73	34.06	0.66	3.20	500	3.53	34.19	0.56	7.6	3.00	27.22	86.0	0.689
592	3.36	34.25	0.47	2.85	600	3.34	34.24	0.47	6.4	2.85	27.28	80.5	0.778
792	3.03	34.32	0.53	3.30	700	3.20	34.29	0.50	6.8	3.05	27.32	76.0	0.860
992	2.74	34.41	0.79u	3.20	800	3.02	34.31	0.53	7.1	3.15	27.36	72.5	0.940
1192	2.51	34.44	0.69	3.30	1000	2.72	34.41	0.58	7.9	3.20	27.46	63.5	1.087

42 HMCS STE. THERESE; August 17, 1955; 2025 GCT; 49°34'N, 160°53'W; sounding, 2700 fm; wind, 280°, force 3; weather, overcast; sea, rough; air temperature, dry 53°, wet 49°; barometer, 1023.8 mb.

0	11.5	32.58	6.30	0.90	0	11.5	32.54	6.30	101.0	0.90	24.80	316.8	0.000
10	11.52	32.55	6.35	1.05	10	11.52	32.54	6.35	102.0	1.05	24.80	316.8	0.032
20	11.52	32.53	6.52	1.05	20	11.52	32.54	6.52	104.0	1.05	24.80	316.8	0.063
30	11.51	32.53	6.34	1.20	30	11.51	32.54	6.34	101.0	1.20	24.80	316.8	0.095
40	10.35	32.57	6.57	1.15	50	7.36	32.69	6.94	102.0	1.20	25.58	241.5	0.151
49	7.36	32.69	6.92	2.50	75	5.05	32.76	7.19	100.0	1.45	25.92	209.5	0.207
74	5.05	32.76	7.19	1.45	100	4.47	32.76	6.77	93.4	1.55	26.00	202.8	0.260
98	4.52	32.76	7.01	1.55	150	4.10	33.74	2.66	36.6	1.65	26.80	125.8	0.343
122	3.89	33.07	5.99	1.65	200	3.91	33.86	2.05	28.1	3.10	26.90	114.8	0.404
146	4.11	33.65	2.71	2.65	250	3.90	33.96	1.58	21.6	3.30	26.98	107.5	0.460
194	3.92	33.84	2.09	3.10	300	3.89	34.04	1.16	16.0	3.35	27.06	101.0	0.514
292	3.88	34.03	1.19	3.35	400	3.74	34.10	0.68	9.3	3.25	27.13	95.0	0.614
392	3.75	34.10	0.69	3.25	500	3.54	34.18	0.65	8.8	3.30	27.21	87.0	0.709
592	3.37	34.22	0.59	3.35	600	3.34	34.24	0.60	8.2	3.35	27.28	80.8	0.797
792	3.04	34.34	0.57	3.15	700	3.20	34.29	0.59	8.0	3.25	27.32	76.0	0.880
992	2.73	34.39	0.90u	3.55	800	3.02	34.34	0.59	8.0	3.15	27.38	70.5	0.960
1192	2.49	34.48	0.74	-	1000	2.72	34.41	0.64	8.7		27.46	63.0	1.104

HMCS STE. THERESE; August 18, 1955; 0414 GCT; 48°14'N, 160°48'W; sounding, 2800 fm; wind, 020°, force 3; weather, overcast; sea, moderate; air temperature, dry 52°, wet 48°; barometer, 1024.5 mb. 43

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	12.5	32.60	6.24	1.50	0	12.5	32.56	6.24	102.0	1.50	24.63	332.5	0.000
10	12.5	32.57	6.28	1.25	10	12.5	32.56	6.28	103.0	1.25	24.63	332.5	0.033
20	12.49	32.55	6.23	1.30	20	12.49	32.56	6.23	102.0	1.30	24.63	332.5	0.066
29	12.36	32.57	6.23	1.45	30	12.36	32.56	6.44	105.0	1.45	24.66	329.5	0.100
39	8.64	32.64	7.01	1.65	50	7.70	32.68	7.02	104.0	1.70	25.52	247.0	0.157
48	7.92	32.67	7.00	1.70	75	5.49	32.83	7.05	100.0	1.75	25.92	208.8	0.214
72	5.48	32.83	7.08	1.75	100	5.32	32.89	6.89	97.6	1.85	25.99	202.5	0.266
96	5.47	32.88	6.93	1.50	150	4.10	33.53	4.15	57.0	2.75	26.64	141.5	0.354
120	4.56	33.08	6.63	1.90	200	4.11	33.79	2.99	41.1	3.00	26.84	122.2	0.420
143	4.10	33.45	4.21	2.80	250	4.02	33.88	2.18	30.0	3.25	26.92	114.8	0.481
190	4.13	33.77	3.10	3.00	300	3.90	33.96	1.51	20.7	3.45	27.00	107.5	0.538
284	3.94	33.94	1.61	3.40	400	3.72	34.09	0.95	13.0	3.65	27.12	95.5	0.643
381	3.76	34.07	0.96	3.65	500	3.57	34.16	0.78	10.7	3.60	27.18	89.0	0.739
577	3.43	34.22	0.75	3.50	600	3.40	34.22	0.77	10.5	3.50	27.26	83.0	0.830
776	3.10	34.31	0.91	3.45	700	3.21	34.27	0.85	11.5	3.45	27.30	78.0	0.914
975	2.82	34.36	0.76	3.15	800	3.07	34.31	0.90	12.1	3.45	27.36	73.5	0.996
1175	2.55	34.44	0.75	3.45	1000	2.80	34.38	0.76	10.4	3.45	27.44	65.5	1.147

HMCS STE. THERESE; August 18, 1955; 1410 GCT; 48°13'N, 163°08'W; sounding, 2900 fm; wind, 330°, force 2; weather, cloudy; sea, slight; air temperature, dry 52°, wet 48°; barometer, 1026.7 mb. 44

0	13.2	32.65	6.12		0	13.2	32.58	6.12	102.0		24.51	343.5	0.000
10	13.2	32.57	6.20		10	13.2	32.58	6.20	103.0		24.51	343.5	0.034
20	12.39	32.57	5.48		20	12.39	32.58	5.48	89.4		24.66	328.5	0.068
30	10.42	32.67	6.23		30	10.42	32.67	6.23	97.7		25.09	288.0	0.099
40	8.50	32.72	6.18		50	6.54	32.84	6.35	91.6		25.81	220.0	0.150
50	6.54	32.84	-		75	5.39	32.91	6.75	95.7		26.01	201.0	0.202
74	5.39	32.91	6.75		100	5.00	32.98	6.38	89.2		26.10	192.0	0.252
98	5.10	32.98	6.43		150	4.34	33.61	4.89	67.5		26.67	138.0	0.336
122	4.22	33.14	6.11		200	4.31	33.78	3.81	52.6		26.81	124.8	0.402
146	4.34	33.55	4.98		250	4.19	33.86	2.99	41.2		26.89	117.5	0.464
194	4.34	33.77	3.89		300	4.03	33.92	2.22	30.5		26.95	112.0	0.522
293	4.06	33.91	2.28		400	3.75	34.03	1.28	17.4		27.07	100.0	0.632
392	3.77	34.01	1.30		500	3.60	34.12	0.90	12.2		27.16	92.0	0.732
592	3.47	34.19	0.69		600	3.45	34.19	0.69	9.4		27.22	86.0	0.826
792	3.11	34.31	0.59		700	3.29	34.25	0.64	8.6		27.28	79.8	0.913
992	2.80	34.37	0.63		800	3.10	34.31	0.59	8.0		27.35	73.5	0.997
1190	2.54	34.46	0.69		1000	2.80	34.39	0.63	8.4		27.44	65.0	1.146

HMCS STE. THERESE; August 18, 1955; 2248 GCT; 48°12'N, 165°11'W; sounding, 2900 fm; wind, 360°, force 1; weather, overcast; sea, slight; air temperature, dry 54°, wet 49°; barometer, 1029.5 mb. 45

0	12.6	32.53	6.05	3.50	0	12.6	32.52	6.05	99.1	2.00	24.58	337.0	0.000
10	12.6	32.52	6.19	2.50	10	12.6	32.52	6.19	102.0	2.00	24.58	337.0	0.034
20	11.6	32.55	6.26	1.85	20	11.6	32.55	6.26	101.0	1.85	24.79	316.8	0.066
30	8.27	32.69	7.01u	2.30	30	8.27	32.69	6.63	99.3	1.80	25.44	256.5	0.095
40	7.01	32.74	6.87	1.80	50	5.62	32.83	7.12	101.0	1.90	25.90	210.8	0.142
49	5.62	32.83	7.12	1.90	75	5.32	32.90	7.01	99.4	2.30	26.00	201.0	0.193
74	5.32	32.90	7.01	2.30	100	5.25	32.98	6.86	96.5	3.10	26.07	195.0	0.244
99	5.25	32.98	6.94	3.10	150	4.20	33.57	5.12	70.5	3.20	26.66	139.5	0.328
123	4.37	33.12	6.54	2.20	200	4.11	33.79	3.45	47.4	3.25	26.84	122.0	0.394
147	4.20	33.52	5.22	3.20	250	4.00	33.88	2.98	40.9	3.50	26.92	114.5	0.455
196	4.13	33.79	3.48	2.95	300	3.89	33.95	2.49	34.0	3.65	26.99	107.5	0.511
294	3.90	33.93	2.59	3.65	400	3.65	34.05	1.22	16.6	3.45	27.09	98.0	0.617
389	3.67	34.05	1.28	3.40	500	3.53	34.14	0.93	12.6	3.50	27.18	90.0	0.715
580	3.46	34.20	0.79	3.70	600	3.41	34.21	0.78	10.6	3.50	27.24	84.0	0.807
777	3.13	34.29	0.68	3.55	700	3.26	34.27	0.73	9.9	3.55	27.30	78.0	0.893
975	2.82	34.39	0.77	3.60	800	3.10	34.32	0.69	9.4	3.55	27.36	72.8	0.975
1173	2.56	34.48	0.79	3.60	1000	2.80	34.40	0.78	10.5	3.55	27.46	63.5	1.122

46 HMCS STE. THERESE; August 19, 1955; 0637 GCT; 48°11.5'N, 167°17.5'W; sounding, 2800 fm; wind, variable, force 1; weather, overcast; sea, slight; air temperature, dry 54°, wet 50°; barometer, 1029.0 mb.

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	$\delta_{T_3}^5$ 10^{-5}cm^3/g	ΔD dyn. m
0	12.5	32.50	6.34	2.45	0	12.5	32.46	6.34	104.0	2.45	24.55	339.8	0.000
10	12.50	32.46	6.39	1.60	10	12.50	32.46	6.39	105.0	1.60	24.55	339.8	0.034
20	10.84	32.50	6.74	1.45	20	10.84	32.50	6.74	107.0	1.45	24.88	307.8	0.066
30	8.69	32.57	7.02	1.80	30	8.69	32.57	7.02	107.0	1.75	25.29	269.0	0.095
40	6.71	32.65	6.96	1.70	50	5.59	32.67	6.89	97.3	2.00	25.79	221.5	0.144
50	5.59	32.67	6.89	2.00	75	4.41	32.85	6.80	93.5	2.15	26.06	195.8	0.195
74	4.41	32.83	6.80	1.85	100	3.60	33.16	6.92	93.8	2.30	26.39	164.5	0.241
98	3.60	33.14	5.90	2.30	150	3.89	33.69	3.42	46.8	3.00	26.78	127.5	0.316
122	3.75	33.40	4.88	2.70	200	3.80	33.88	1.96	26.8	3.05	26.94	112.2	0.376
146	3.89	33.67	3.50	3.00	250	3.83	33.96	1.25	17.2	3.25	27.00	106.5	0.432
194	3.76	33.86	2.00	3.05	300	3.88	34.02	0.92	12.6	3.45	27.04	102.5	0.485
293	3.88	34.01	0.93	3.45	400	3.70	34.11	0.71	9.6	3.35	27.14	94.0	0.586
393	3.70	34.10	0.71	3.35	500	3.50	34.18	0.71	9.6	3.40	27.21	86.8	0.678
594	3.33	34.24	0.71	-	600	3.31	34.24	0.71	9.6	3.40	27.28	80.5	0.769
796	3.04	34.31	0.63	3.45	700	3.20	34.28	0.67	9.1	3.45	27.32	77.0	0.853
996	2.71	34.39	0.68	3.55	800	3.05	34.33	0.63	8.4	3.45	27.37	71.5	0.933
1195	2.48	34.44	0.83	3.45	1000	2.71	34.39	0.69	9.3	3.55	27.46	64.2	1.080

47 HMCS STE. THERESE; August 19, 1955; 1451 GCT; 48°10'N, 169°18'W; sounding, 3000 fm; wind, 200°, force 2; weather, overcast; sea, slight; air temperature, dry 55°, wet 52°; barometer, 1028.6 mb.

0	13.4	32.62	6.15	3.50	0	13.4	32.60	6.15	102.0	2.40	24.48	346.0	0.000
10	12.85	32.58	6.34	2.75	10	12.85	32.60	6.34	105.0	2.35	24.60	335.5	0.034
20	11.33	32.60	6.62	2.35	20	11.33	32.60	6.62	106.0	2.35	24.88	308.5	0.066
30	8.85	32.69	6.98	1.90	30	8.85	32.69	6.98	106.0	1.90	25.36	262.5	0.095
40	7.18	32.76	7.14	2.75	50	5.82	32.78	7.09	101.0	1.70	25.85	216.5	0.143
50	5.82	32.78	7.09	1.70	75	4.96	32.83	7.04	98.9	1.60	25.99	202.8	0.195
75	4.96	32.83	7.04	1.60	100	4.09	33.00	6.92	95.4	1.60	26.22	181.2	0.244
99	4.09	32.98	6.96	1.75	150	4.06	33.66	4.19	57.5	2.00	26.74	131.5	0.323
123	3.90	33.34	5.35	2.70	200	3.96	33.80	3.26	44.7	2.55	26.87	119.5	0.387
146	4.06	33.62	4.25	2.45	250	3.93	33.88	2.28	31.3	2.85	26.94	113.5	0.446
196	3.96	33.79	-	2.60	300	3.90	33.95	1.42	19.5	3.00	26.98	108.0	0.503
295	3.90	33.94	1.44	3.00	400	3.78	34.06	0.87	11.9	3.15	27.09	98.5	0.609
395	3.78	34.06	0.87	3.15	500	3.60	34.14	0.73	9.9	3.20	27.17	91.0	0.708
595	3.41	34.20	0.66	3.40	600	3.42	34.21	0.67	9.1	3.25	27.24	84.0	0.800
795	3.06	34.31	0.72	3.15	700	3.22	34.27	0.69	9.4	3.25	27.30	78.0	0.886
995	2.73	34.41	0.67	3.10	800	3.05	34.32	0.73	9.8	3.25	27.36	72.5	0.967
1194	2.51	34.46	0.77	3.30	1000	2.72	34.41	0.67	9.0	3.30	27.46	63.5	1.114

48 HMCS STE. THERESE; August 19, 1955; 2307 GCT; 48°10.6'N, 171°21'W; sounding, 3000 fm; wind, 210°, force 2; weather, partly cloudy; sea, slight; air temperature, dry 59°, wet 56°; barometer, 1028.0 mb.

0	13.8	32.62	6.34	-	0	13.8	32.62	6.34	106.0	(1.80)	24.42	352.5	0.000
10	12.62	32.52	6.51	1.80	10	12.62	32.52	6.51	106.0	1.80	24.57	338.0	0.034
20	11.38	32.57	6.80	1.55	20	11.38	32.57	6.80	109.0	1.55	24.85	311.0	0.067
30	9.08	32.67	6.85	2.00	30	9.08	32.67	6.85	105.0	1.55	25.30	267.5	0.096
40	8.15	32.76	6.96	1.55	50	6.67	32.84	7.02	102.0	1.95	25.79	222.0	0.145
49	6.67	32.84	7.04	1.95	75	5.02	32.91	6.90	96.3	1.95	26.04	198.2	0.197
73	5.02	32.90	6.90	1.95	100	4.18	33.07	6.74	92.3	2.05	26.26	176.5	0.245
98	4.18	33.07	6.80	2.05	150	3.86	33.55	4.78	65.4	3.00	26.67	138.0	0.325
121	3.61	33.17	6.39	1.95	200	3.89	33.76	3.42	46.8	3.10	26.84	122.0	0.391
146	3.86	33.50	4.86	2.00	250	3.83	33.85	2.61	35.6	3.15	26.92	115.0	0.451
194	3.89	33.74	3.50	2.75	300	3.79	33.93	1.88	25.7	3.15	26.98	108.0	0.508
294	3.79	33.93	1.94	3.15	400	3.62	34.04	1.27	17.2	3.15	27.08	99.0	0.614
394	3.64	34.01	1.29	3.15	500	3.52	34.13	0.95	12.9	3.15	27.17	90.8	0.713
594	3.44	34.20	0.78	3.55	600	3.41	34.20	0.78	10.6	3.20	27.24	84.5	0.805
794	3.07	34.31	0.68	3.30	700	3.24	34.26	0.73	9.8	3.25	27.30	79.0	0.890
995	2.77	34.37	0.78	3.65	800	3.05	34.31	0.69	9.4	3.30	27.36	72.8	0.973
1192	2.53	34.46	0.88	3.70	1000	2.77	34.39	0.79	10.7	3.40	27.45	64.8	1.122

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 20, 1955; 0726 GCT; 48°20'N, 173°26'W; sounding, 2649 fm; wind, 180°, force 2; weather, cloudy; sea, slight; air temperature, dry 57°, wet 55°; barometer, 1026.5 mb. 49

0	12.5	32.62	6.80	1.65	0	12.5	32.60	6.80	111.0	1.65	24.66	329.5	0.000
10	11.44	32.58	7.40	1.45	10	11.44	32.60	7.40	119.0	1.45	24.85	310.8	0.031
20	8.80	32.74	7.69	1.60	20	8.80	32.74	7.69	117.0	1.60	25.40	258.0	0.059
30	7.41	32.84	7.60	1.80	30	7.41	32.84	7.60	112.0	1.80	25.68	231.5	0.084
40	6.22	32.91	7.41	2.10	50	5.56	32.95	7.55	107.0	2.10	26.02	200.0	0.127
50	5.56	32.95	7.55	2.10	75	4.98	33.10	7.63	107.0	2.10	26.20	182.8	0.175
75	4.98	33.10	7.73u	1.85	100	4.00	33.12	7.51	103.0	2.20	26.32	171.0	0.220
100	4.00	33.07	7.51	2.20	150	3.75	33.30	7.19	97.9	2.40	26.48	155.5	0.303
124	3.68	33.14	7.40	2.20	200	4.05	33.76	4.37	60.0	2.65	26.82	124.0	0.373
149	3.75	33.29	7.28	2.40	250	3.93	33.84	3.42	46.8	2.95	26.90	116.0	0.434
198	4.05	33.76	4.39	2.65	300	3.82	33.90	2.54	34.7	3.20	26.96	111.0	0.493
296	3.82	33.89	2.59	3.20	400	3.69	34.01	1.67	22.7	3.45	27.06	101.5	0.602
394	3.69	34.00	1.69	3.45	500	3.60	34.10	1.25	17.1	3.45	27.14	93.5	0.704
592	3.52	34.17	0.96	-	600	3.50	34.17	0.96	13.1	3.50	27.20	87.5	0.799
792	3.13	34.29	0.84	3.55	700	3.31	34.23	0.90	12.1	3.50	27.27	81.2	0.888
992	2.84	34.36	0.78	3.45	800	3.12	34.29	0.84	11.3	3.55	27.33	77.0	0.974
1190	2.56	34.43	0.78	3.65	1000	2.85	34.37	0.78	10.6	3.60	27.42	66.8	1.125

HMCS STE. THERESE; August 20, 1955; 1336 GCT; 48°20'N, 175°30'W; sounding, 2800 fm; wind, 170°, force 3; weather, fog, drizzle; sea, moderate; air temperature, dry 58°, wet 58°; barometer, 1021.6 mb. 50

0	14.3	32.60	6.24	1.60	0	14.3	32.56	6.24	105.0	1.60	24.26	366.8	0.000
10	12.77	32.55	6.62	1.40	10	12.77	32.56	6.62	109.0	1.40	24.58	336.5	0.035
20	9.28	32.72	7.35	1.60	20	9.28	32.72	7.35	113.0	1.60	25.31	267.0	0.065
29	7.19	32.98	7.07	1.70	30	7.19	33.00	7.07	104.0	1.70	25.85	216.0	0.090
38	6.47	33.02	7.01	1.90	50	5.60	33.03	7.02	100.0	1.90	26.08	194.8	0.130
48	5.60	33.03	7.02	1.90	75	4.47	33.05	7.09	98.0	1.90	26.22	181.2	0.178
71	4.47	33.05	7.08	1.90	100	3.90	33.07	7.14	97.4	2.00	26.29	174.0	0.223
96	3.98	33.07	7.21	2.00	150	3.50	33.38	6.11	82.9	2.40	26.58	147.0	0.304
119	3.41	33.14	-	2.10	200	3.95	33.77	3.99	54.7	2.65	26.84	122.0	0.372
143	3.46	33.33	6.34	2.35	250	3.75	33.82	3.15	43.0	2.90	26.90	116.0	0.432
191	3.99	33.76	4.10	2.65	300	3.60	33.87	2.45	33.4	3.15	26.96	111.0	0.491
291	3.59	33.86	2.53	3.15	400	3.65	34.01	1.56	21.2	3.35	27.06	101.0	0.600
391	3.65	34.00	1.59	3.35	500	3.57	34.10	1.18	16.0	3.45	27.14	93.0	0.701
591	3.48	34.17	0.96	3.60	600	3.45	34.17	0.96	13.1	3.55	27.20	87.5	0.795
791	3.17	34.29	0.76	3.55	700	3.30	34.23	0.86	11.7	3.60	27.27	81.5	0.854
991	2.84	34.37	0.85	3.80	800	3.15	34.28	0.76	10.3	3.65	27.32	76.0	0.970
1189	2.55	34.44	0.97	3.80	1000	3.82	34.37	0.85	11.4	3.75	27.43	66.0	1.123

HMCS STE. THERESE; August 20, 1955; 2240 GCT; 49°19'N, 175°30'W; sounding, 2900 fm; wind, 170°, force 3; weather, fog; sea, moderate; air temperature, dry 58°, wet 56°; barometer, 1018.4 mb. 51

0	12.6	32.62	6.33	1.20	0	12.6	32.60	6.33	104.0	1.20	24.64	331.5	0.000
10	12.53	32.60	6.40	0.90	10	12.53	32.60	6.40	105.0	0.90	24.65	330.0	0.033
20	9.38	32.78	7.09	1.25	20	9.38	32.78	7.09	110.0	1.25	25.36	263.2	0.063
29	7.50	32.98	7.20	1.80	30	7.50	32.98	7.19	106.0	1.80	25.78	222.0	0.087
39	6.18	33.02	7.05	1.85	50	5.33	33.07	7.01	98.6	2.00	26.14	189.2	0.128
48	5.33	33.07	7.01	2.00	75	4.50	33.12	7.07	97.7	2.00	26.26	176.2	0.174
72	4.55	33.12	7.07	2.00	100	3.82	33.12	7.08	96.2	2.25	26.33	170.0	0.218
96	3.88	33.12	7.09	2.25	150	3.28	33.25	6.68	90.0	2.35	26.49	155.3	0.300
119	3.67	33.15	7.05	1.85	200	3.38	33.70	4.50	61.0	2.60	26.84	122.0	0.370
142	3.27	33.20	7.01	2.00	250	3.42	33.80	2.66	36.1	2.90	26.92	116.8	0.430
187	3.35	33.60	4.83	2.50	300	3.48	33.89	2.41	32.7	3.10	26.98	108.8	0.488
279	3.47	33.86	2.68	3.05	400	3.53	34.03	1.62	22.1	3.30	27.08	98.5	0.594
372	3.53	34.00	1.76	3.30	500	3.50	34.13	1.18	16.0	3.45	27.17	90.8	0.692
564	3.46	34.19	0.95	3.45	600	3.40	34.21	0.88	12.0	3.50	27.24	84.0	0.785
759	3.19	34.29	0.75	3.55	700	3.25	34.26	0.78	10.6	3.55	27.30	78.8	0.872
958	2.87	34.37	0.78	-	800	3.10	34.30	0.75	10.1	3.55	27.34	74.0	0.954
1157	2.61	34.44	0.78	3.70	1000	2.82	34.38	0.78	10.5	3.65	27.44	65.5	1.105

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m
52	HMCS STE. THERESE; August 21, 1955; 0555 GCT; 50°28'N, 175°30'W; sounding, 4002 fm; wind, 190°, force 3; weather, fog; sea, slight; air temperature, dry 54°, wet 54°; barometer, 1015.1 mb.												
0	12.1	32.60	6.72	1.20	0	12.1	32.60	6.72	109.0	1.20	24.73	322.0	0.000
10	11.90	32.58	6.45	0.90	10	11.90	32.60	6.45	104.0	0.90	24.77	318.5	0.032
20	11.71	32.62	6.52	0.90	20	11.71	32.62	6.52	105.0	0.90	24.82	314.0	0.064
30	8.59	32.81	7.19	1.45	30	8.59	32.81	7.19	109.0	1.45	25.49	249.5	0.092
40	6.45	32.90	7.01	1.95	50	5.09	32.96	6.76	94.7	2.35	26.07	195.0	0.136
50	5.09	32.96	6.76	2.35	75	3.83	33.14	6.45	87.7	2.60	26.35	168.5	0.182
75	3.83	33.14	6.45	2.60	100	3.61	33.31	5.63	76.3	2.65	26.50	153.5	0.223
100	3.61	33.31	5.63	2.50	150	3.92	33.67	2.99	41.0	3.15	26.76	129.2	0.295
125	3.92	33.52	3.81	2.75	200	3.90	33.84	2.04	27.9	3.40	26.90	116.2	0.356
149	3.92	33.67	3.02	3.15	250	3.67	33.91	1.59	21.7	3.45	26.98	109.0	0.413
197	3.93	33.84	2.07	3.40	300	3.45	34.00	1.23	16.7	3.45	27.07	100.0	0.466
294	3.44	33.96	1.25	3.45	400	3.54	34.10	0.74	10.0	3.65	27.14	93.0	0.566
392	3.54	34.10	0.74	3.65	500	3.43	34.18	0.56	7.6	3.70	27.22	86.5	0.658
590	3.32	34.24	0.52	3.55	600	3.31	34.25	0.52	7.0	3.70	27.28	80.0	0.746
788	2.98	34.34	0.56	3.55	700	3.12	34.29	0.54	7.3	3.70	27.34	75.0	0.828
986	2.73	34.37	0.67	-	800	2.95	34.33	0.56	7.5	3.70	27.39	70.0	0.906
1185	2.47	34.43	0.78	3.70	1000	2.72	34.38	0.68	9.2	3.70	27.44	65.0	1.052
53	HMCS STE. THERESE; August 21, 1955; 1307 GCT; 51°32'N, 175°30'W; sounding, 3500 fm; wind, 200°, force 3; weather, overcast; sea, moderate; air temperature, dry 51°, wet 51°; barometer, 1013.2 mb.												
0	10.7	32.19	6.48	0.70	0	10.7	32.20	6.48	102.0	0.70	24.68	327.0	0.000
10	10.33	32.22	6.80	0.55	10	10.33	32.20	6.80	106.0	0.55	24.76	320.0	0.032
19	8.58	32.34	7.27	0.90	20	8.58	32.34	7.19	108.0	0.90	25.15	283.2	0.063
29	7.20	32.67	6.63	1.50	30	7.20	32.67	6.58	96.4	1.50	25.58	241.0	0.089
39	6.18	32.67	6.33	1.55	50	4.80	32.77	6.05	84.0	1.70	25.95	226.0	0.134
48	4.85	32.76	6.09	1.70	75	4.20	32.97	5.56	76.2	2.10	26.18	184.5	0.182
72	4.23	32.95	5.60	2.10	100	3.87	33.24	4.47	60.9	2.40	26.42	161.2	0.227
96	3.85	33.20	4.59	2.35	150	4.39	33.71	2.47	34.3	2.60	26.77	128.8	0.300
121	3.93	33.45	3.52	2.55	200	4.51	33.87	1.40	19.5	2.65	26.86	120.0	0.362
145	4.34	33.67	2.56	3.45	250	4.25	33.94	0.92	12.7	3.00	26.94	112.0	0.421
192	4.54	33.86	1.50	2.65	300	4.02	34.00	0.71	9.7	3.30	27.02	105.5	0.477
288	4.06	34.00	0.71	3.30	400	3.81	34.09	0.62	8.4	3.30	27.10	96.8	0.580
380	3.85	34.06	0.63	3.20	500	3.68	34.16	0.53	7.2	3.30	27.18	90.0	0.677
585	3.53	34.22	0.46	3.30	600	3.50	34.22	0.46	6.2	3.30	27.24	84.0	0.768
786	3.17	34.32	0.48	3.40	700	3.32	34.27	0.47	6.4	3.35	27.30	78.5	0.854
985	2.88	34.37	0.53	3.50	800	3.15	34.31	0.48	6.5	3.40	27.35	74.0	0.936
1181	2.61	34.43	0.59	3.55	1000	2.87	34.38	0.54	7.2	3.50	27.43	66.0	1.087
54	HMCS STE. THERESE; August 22, 1955; 1147 GCT; 51°40'N, 173°33'W; sounding, 4002 fm; wind, 190°, force 3; weather, fog; sea, moderate; air temperature, dry 54°, wet 54°; barometer, 1015.1 mb.												
0	8.2	32.33	6.82	1.25	0	8.2	32.33	6.82	101.0	1.25	25.18	279.8	0.000
10	6.59	32.40	6.56	1.10	10	6.59	32.40	6.56	94.7	1.10	25.46	253.5	0.027
20	6.06	32.88	5.80	2.05	20	6.06	32.88	5.80	83.0	2.05	25.90	211.5	0.050
29	5.67	33.03	5.32	2.05	30	5.67	33.03	5.30	75.1	2.05	26.06	195.5	0.070
38	5.50	33.10	5.27	1.90	50	5.19	33.17	4.99	70.1	2.05	26.24	180.0	0.108
48	5.19	33.17	4.99	2.00	75	4.65	33.25	4.88	67.9	2.25	26.35	168.0	0.151
71	4.65	33.24	4.95	2.25	100	4.63	33.47	3.90	54.1	2.50	26.53	151.0	0.192
95	4.60	33.41	4.22	2.45	150	4.39	33.81	1.87	25.9	3.10	26.83	123.0	0.261
119	4.93	33.70	2.61	2.95	200	4.06	33.90	1.27	17.4	3.55	26.94	113.0	0.321
143	4.41	33.81	1.95	3.10	250	4.00	33.97	0.86	11.8	3.70	26.99	108.0	0.376
190	4.09	33.87	1.33	3.55	300	3.92	34.03	0.69	9.5	3.65	27.05	102.0	0.429
287	3.99	34.03	0.69	3.70	400	3.70	34.11	0.87	11.9	3.10	27.14	94.0	0.530
388	3.71	34.06	0.88	3.10	500	3.58	34.18	0.72	9.8	3.15	27.20	87.2	0.624
587	3.45	34.22	0.57	3.25	600	3.43	34.24	0.57	7.8	3.25	27.26	82.0	0.713
788	3.23	34.29	0.53	3.35	700	3.32	34.28	0.55	7.4	3.30	27.32	77.2	0.796
988	2.87	34.39	0.72	3.45	800	3.20	34.32	0.55	7.4	3.40	27.35	73.5	0.877
1188	2.62	34.44	0.73	3.00	1000	2.85	34.39	0.73	9.8	3.45	27.44	65.0	1.026

OBSERVED					INTERPOLATED						COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_{T_3} 10^{-5} cm^3/g	ΔD dyn. m	
HMCS STE. THERESE; August 22, 1955; 1951 GCT; 51°49'N, 171°37'W; sounding, 927 fm; wind, 180°, force 4; weather, fog in patches; sea, missing; air temperature, dry 52°, wet 51.5°; barometer, 1003.5 mb.														55
0	7.5	32.43	–	1.40	0	7.5	32.42	(6.49)	95.4	1.40	25.34	263.8	0.000	
10	7.41	32.40	6.46	1.00	10	7.41	32.42	6.46	94.7	1.00	25.36	262.5	0,026	
20	6.45	32.64	6.37	1.40	20	6.45	32.64	6.37	91.9	1.40	25.66	234.5	0.051	
30	5.70	32.76	6.32	1.55	30	5.70	32.76	6.32	90.2	1.55	25.85	216.2	0.074	
40	5.44	32.84	6.09	1.45	50	4.73	33.10	5.26	73.1	2.20	26.23	180.2	0.113	
50	4.73	33.10	5.26	2.20	75	4.96	33.33	3.84	53.8	2.20	26.38	165.0	0.156	
74	4.96	33.33	3.86	2.20	100	4.71	33.45	3.61	50.3	2.30	26.50	153.5	0.197	
98	4.72	33.44	3.64	2.30	150	4.58	33.64	2.64	36.8	2.80	26.67	138.0	0.270	
121	4.54	33.58	3.22	2.40	200	4.40	33.84	1.96	27.2	2.95	26.85	121.0	0.336	
145	4.59	33.62	2.71	2.75	250	4.20	33.99	1.43	19.8	2.85	26.99	108.0	0.394	
193	4.43	33.82	1.99	2.95	300	4.01	34.04	0.95	13.2	2.80	27.04	102.5	0.448	
290	4.03	34.03	1.03	2.80	400	3.82	34.12	0.54	7.4	2.95	27.13	94.5	0.548	
388	3.85	34.12	0.55	2.95	500	3.70	34.18	0.53	7.2	3.00	27.20	88.8	0.644	
584	3.56	34.22	0.50	2.90	600	3.55	34.23	0.50	6.9	3.05	27.24	83.5	0.734	
780	3.24	34.27	0.45	3.30	700	3.39	34.27	0.47	6.4	3.15	27.30	79.0	0.819	
976	2.95	34.36	0.73	3.20	800	3.20	34.31	0.48	6.5	3.25	27.34	74.5	0.902	
1169	2.75	34.41	0.68	3.50	1000	2.91	34.37	0.73	9.8	3.40	27.42	67.0	1.055	
HMCS STE. THERESE; August 23, 1955; 1254 GCT; 52°14'N, 167°56'W; sounding, 2400 fm; wind, 260°, force 5; weather, overcast; sea, rough; air temperature, dry 53°, wet 52°; barometer, 1002.3 mb.														57
0	11.0	32.14	6.54	0.30	0	11.0	32.10	6.54	103.0	0.30	24.54	340.0	0.000	
10	10.78	32.10	6.46	0.30	10	10.78	32.10	6.46	102.0	0.30	24.59	335.0	0.034	
20	10.76	32.10	6.49	0.40	20	10.76	32.10	6.49	102.0	0.40	24.59	335.0	0.067	
30	10.37	32.14	6.62	0.45	30	10.37	32.14	6.62	104.0	0.45	24.69	325.0	0.100	
40	7.66	32.38	6.74	0.70	50	6.25	32.61	6.68	96.0	1.00	25.66	234.0	0.156	
50	6.25	32.62	6.68	1.00	75	4.22	33.02	6.05	82.8	1.60	26.22	181.0	0.208	
75	4.22	33.00	6.05	1.60	100	3.72	33.31	4.93	66.9	1.95	26.50	154.8	0.251	
100	3.72	33.31	4.93	1.95	150	4.12	33.75	2.16	29.7	2.70	26.81	125.0	0.322	
124	3.82	33.50	3.93	2.35	200	4.16	33.94	0.96	13.3	3.20	26.96	111.0	0.381	
148	4.12	33.74	2.18	2.70	250	4.03	34.00	0.93	12.8	3.30	27.01	106.0	0.436	
197	4.16	33.93	0.96	3.20	300	3.95	34.06	0.90	12.3	3.30	27.07	100.0	0.489	
297	3.95	34.05	–	3.30	400	3.71	34.14	0.84	11.5	2.70	27.16	92.0	0.587	
397	3.74	34.13	0.84	2.70	500	3.51	34.21	0.70	9.6	2.85	27.23	84.8	0.679	
597	3.31	34.25	0.56	3.05	600	3.30	34.26	0.56	7.6	3.05	27.29	78.8	0.766	
797	3.01	34.36	0.58	3.30	700	3.18	34.31	0.57	7.7	3.20	27.34	74.2	0.847	
997	2.74	34.39	0.68	–	800	3.01	34.35	0.58	7.8	3.30	27.39	70.0	0.924	
1197	2.49	34.49	0.77	3.45	1000	2.74	34.41	0.69	9.3	3.40	27.46	63.0	1.068	
HMCS STE. THERESE; August 23, 1955; 1916, 1940 GCT; 51°13'N, 167°58'W; sounding, 2800 fm; wind, 260°, force 4; weather, cloudy; sea, rough; air temperature, dry 52°, wet 51°; barometer, 1007.5 mb.														58
0	10.8	32.31	6.40	1.00	0	10.8	32.26	6.40	101.0	1.00	24.52	342.0	0.000	
9	10.78	32.26	6.39	0.80	10	10.78	32.26	6.51	103.0	0.80	24.53	340.0	0.034	
18	10.77	32.26	7.08	0.85	20	10.77	32.26	6.95	110.0	0.85	24.53	340.0	0.068	
27	10.62	32.28	6.55	0.85	30	10.60	32.32	6.58	104.0	0.85	24.78	316.8	0.101	
36	8.54	32.40	6.77	1.10	50	5.80	32.73	6.94	98.7	1.60	25.82	219.5	0.154	
44	6.29	32.71	6.96	1.50	75	4.67	32.97	6.72	93.3	2.15	26.13	189.2	0.206	
67	4.67	32.88	6.91	1.90	100	4.10	33.20	5.88	80.5	2.50	26.38	166.0	0.251	
89	3.63	33.12	6.38	2.50	150	3.80	33.73	3.64	49.7	2.95	26.82	124.0	0.324	
111	3.51	33.29	5.27	2.40	200	3.80	33.83	2.18	29.8	3.30	26.90	116.5	0.386	
					250	3.75	33.91	1.59	21.7	3.35	26.97	109.0	0.442	
134	3.78	33.58	4.21	2.75	300	3.70	33.99	1.27	17.3	3.40	27.04	103.0	0.497	
178	3.82	33.79	2.56	3.30	400	3.60	34.10	0.90	12.2	3.50	27.14	94.0	0.598	
277	3.73	33.94	1.39	3.35	500	3.50	34.17	0.67	9.1	3.45	27.20	87.5	0.692	
358	3.64	34.06	1.02	3.50	600	3.35	34.23	0.62	8.4	3.45	27.26	81.8	0.782	
542	3.45	34.20	0.62	3.40	700	3.19	34.28	0.62	8.3	3.60	27.32	76.0	0.865	
730	3.13	34.30	0.62	3.60	800	3.02	34.32	0.65	8.7	3.65	27.36	72.0	0.945	
920	2.85	34.37	0.73	3.70	1000	2.78	34.39	0.73	9.8	3.70	27.45	64.8	1.093	
1116	2.62	34.43	0.73	3.70										

POG

NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δT_{-5} 10^{-5} cm^3/g	ΔD dyn. m

59 HMCS STE. THERESE; August 24, 1955; 0309 GCT; 50°04'N, 167°55'W; sounding, 2700 fm; wind, 250°, force 5; weather, overcast; sea, rough; air temperature, dry 52°, wet 51°; barometer, 1010.7 mb.

0	11.3	32.34	6.35	1.10	0	11.3	32.34	6.35	101.0	1.10	24.66	327.5	0.000
10	11.27	32.33	6.46	1.00	10	11.27	32.34	6.46	103.0	1.00	24.68	326.0	0.033
20	8.95	32.38	6.80	1.50	20	8.95	32.38	6.80	103.0	1.50	25.09	287.8	0.063
30	6.43	32.62	6.84	1.65	30	6.43	32.62	6.84	99.2	1.65	25.64	235.5	0.090
40	5.63	32.67	6.81	1.90	50	5.03	32.71	6.76	95.0	1.85	25.88	213.0	0.135
50	5.03	32.71	6.76	1.85	75	3.95	32.93	6.40	88.0	2.30	26.18	184.8	0.184
75	3.95	32.93	6.40	2.30	100	3.60	33.23	5.56	75.4	2.65	26.45	159.2	0.228
99	3.60	33.22	5.61	2.65	150	4.00	33.70	3.11	42.7	3.10	26.78	127.5	0.301
123	3.86	33.48	4.20	3.10	200	3.74	33.83	1.96	26.7	3.15	26.91	117.5	0.361
147	4.00	33.69	3.18	3.05	250	3.73	33.93	1.37	18.6	3.30	26.98	108.0	0.418
195	3.74	33.82	2.12	3.15	300	3.71	34.01	1.09	14.8	3.50	27.06	101.5	0.471
294	3.71	34.00	1.10	3.50	400	3.64	34.10	0.78	11.9	3.50	27.13	94.5	0.572
393	3.66	34.08	0.88	3.50	500	3.50	34.17	0.74	10.0	3.35	27.20	87.5	0.667
592	3.35	34.22	0.62	3.25	600	3.33	34.23	0.62	8.3	3.25	27.26	81.8	0.756
794	2.99	34.32	0.60	3.65	700	3.15	34.28	0.62	8.3	3.35	27.32	76.0	0.839
994	2.73	34.39	1.40u	–	800	2.99	34.32	0.60	8.2	3.40	27.38	71.5	0.916
1192	2.50	34.43	0.67	3.60	1000	2.72	34.39	0.65	8.8	3.55	27.45	64.5	1.064

60 HMCS STE. THERESE; August 24, 1955; 0935 GCT; 49°02'N, 167°42'W; sounding, 2800 fm; wind, 240°, force 5; weather, overcast; sea, moderate; air temperature, dry 56°, wet 54°; barometer, 1014.0 mb.

0	12.5	32.45	6.16	1.00	0	12.5	32.42	6.16	101.0	1.00	24.50	342.0	0.000
10	12.39	32.41	6.18	0.90	10	12.39	32.42	6.18	101.0	0.90	24.52	341.0	0.034
20	12.37	32.43	6.28	0.90	20	12.37	32.42	6.28	102.0	0.90	24.54	340.0	0.068
30	9.76	32.53	6.90	1.15	30	9.76	32.53	6.90	107.0	1.15	25.10	288.0	0.100
40	8.16	32.57	7.04	1.30	50	6.58	32.65	7.00	101.0	1.30	25.66	234.8	0.152
49	6.58	32.65	7.01	1.30	75	4.85	32.72	6.89	95.8	1.50	25.91	210.0	0.208
73	4.95	32.71	6.89	1.50	100	3.92	32.96	6.21	84.6	2.00	26.20	182.8	0.258
97	3.93	32.89	6.37	2.00	150	4.01	33.71	2.99	41.0	2.30	26.78	127.5	0.338
121	3.88	33.43	4.51	2.20	200	4.00	33.87	1.62	22.3	2.95	26.91	115.0	0.401
145	4.01	33.67	3.09	2.30	250	3.90	33.96	1.23	16.9	3.10	27.00	107.0	0.458
191	4.02	33.86	1.69	2.90	300	3.81	34.02	1.05	14.4	3.15	27.05	102.2	0.511
280	3.84	34.00	1.07	3.15	400	3.69	34.11	0.90	12.2	3.10	27.14	94.0	0.612
370	3.72	34.08	0.95	3.10	500	3.51	34.18	0.73	9.9	3.20	27.20	87.0	0.707
559	3.41	34.22	0.64	3.05	600	3.35	34.23	0.64	8.7	3.25	27.26	82.0	0.795
755	3.08	34.30	0.66	3.65	700	3.18	34.28	0.65	8.8	3.30	27.32	76.5	0.880
954	2.76	34.37	0.69	3.35	800	3.00	34.32	0.67	9.0	3.35	27.37	71.8	0.960
1150	2.56	34.44	0.79	3.35	1000	2.71	34.39	0.73	9.8	3.35	27.45	64.0	1.106

61 HMCS STE. THERESE; August 24, 1955; 1549 GCT; 48°00'N, 167°30'W; sounding, 2800 fm; wind, 260°, force 3; weather, overcast, drizzle; sea, rough; air temperature, dry 56°, wet 55°; barometer, 1014.6 mb.

0	13.0	32.46	6.15	1.20	0	13.0	32.44	6.15	102.0	1.20	24.44	350.0	0.000
10	12.80	32.43	6.18	1.10	10	12.80	32.44	6.18	102.0	1.10	24.48	346.0	0.035
20	12.21	32.46	6.40	1.15	20	12.21	32.46	6.40	104.0	1.15	24.60	334.5	0.069
30	8.18	32.57	7.11	1.50	30	8.18	32.58	7.11	106.0	1.50	25.38	261.0	0.099
40	6.87	32.64	6.52	1.40	50	6.35	32.68	6.89	99.2	1.55	25.71	229.5	0.148
49	6.35	32.67	6.90	1.55	75	4.82	32.85	6.35	88.0	1.80	26.02	200.0	0.201
73	4.82	32.83	6.35	1.80	100	3.90	33.07	6.19	84.4	2.10	26.29	174.0	0.249
97	3.92	33.03	6.43	2.05	150	3.88	33.53	4.27	58.3	2.50	26.65	140.0	0.328
120	3.75	33.32	5.04	2.35	200	3.80	33.81	2.86	39.1	2.85	26.88	117.5	0.394
146	3.88	33.50	4.39	2.45	250	3.77	33.89	1.74	23.7	3.10	26.96	111.0	0.452
192	3.80	33.79	2.96	2.80	300	3.73	33.95	1.25	17.1	3.30	27.00	106.5	0.508
290	3.75	33.94	1.28	3.35	400	3.66	34.06	1.02	13.9	3.40	27.10	97.2	0.612
390	3.68	34.06	1.03	3.40	500	3.54	34.14	0.86	11.7	3.40	27.18	90.5	0.710
590	3.45	34.18	0.73	3.40	600	3.42	34.20	0.73	9.9	3.40	27.24	84.8	0.803
790	3.06	34.29	0.60	3.45	700	3.22	34.26	0.65	8.8	3.45	27.30	78.8	0.888
990	2.77	34.39	0.67	3.15	800	3.05	34.31	0.60	8.2	3.45	27.36	72.8	0.970
1190	2.51	34.44	0.78	3.45	1000	2.76	34.39	0.67	9.0	3.45	27.44	65.0	1.120

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δT_{-5}^{3} 10^{-5} cm/g	ΔD dyn. m

HMCS STE. THERESE; August 24, 1955; 2255, 2231 GCT; 46°57'N, 167°26'W; sounding, 3000 fm; wind, 280°, force 4; weather, overcast; sea, moderate; air temperature, dry 55°, wet 55°; barometer, 1020.3 mb. 62

0	13.7	32.55	6.35	1.00	0	13.7	32.50	6.35	106.0	1.00	24.34	359.5	0.000
10	13.54	32.53	6.18	0.85	10	13.54	32.53	6.18	103.0	0.85	24.40	353.5	0.036
20	12.04	32.62	6.57	0.75	20	12.04	32.62	6.57	106.0	0.75	24.75	320.5	0.069
30	8.37	32.67	7.02	1.05	30	8.37	32.67	7.02	101.0	1.05	25.42	256.8	0.098
40	6.37	32.72	7.46	1.15	50	5.34	32.76	6.90	96.9	1.05	25.89	211.0	0.145
50	5.34	32.76	6.90	1.05	75	5.04	32.83	6.46	90.2	1.10	25.98	204.2	0.197
75	5.04	32.83	6.46	1.10	100	4.65	33.10	6.39	88.8	1.25	26.24	179.5	0.246
100	4.65	33.10	6.39	1.25	150	4.03	33.62	4.60	63.0	2.05	26.71	134.5	0.325
125	4.05	33.39	6.06	1.70	200	3.84	33.77	3.71	50.6	2.10	26.85	121.5	0.390
150	4.03	33.62	4.60	2.05	250	3.84	33.87	2.58	35.2	2.25	26.93	113.5	0.450
199	3.84	33.77	3.74	2.10	300	3.83	33.94	1.55	21.1	2.50	26.98	108.5	0.506
296	3.83	33.94	1.57	2.50	400	3.77	34.05	1.04	14.2	2.90	27.08	99.0	0.612
					500	3.60	34.13	0.84	11.4	2.95	27.16	91.5	0.711
392	3.79	34.05	1.05	2.90	600	3.47	34.20	0.75	10.2	3.00	27.23	85.0	0.804
592	3.48	34.20	0.74	3.00	700	3.30	34.25	0.75	10.2	3.05	27.28	80.0	0.890
792	3.10	34.30	0.74	3.20	800	3.10	34.31	0.75	10.1	3.10	27.35	73.5	0.931
992	2.78	34.37	0.75	3.05	1000	2.78	34.39	0.75	10.1	3.25	27.44	64.8	1.081
1191	2.52	34.46	0.85	3.30									

HMCS STE. THERESE; August 25, 1955; 0620 GCT; 46°59'N, 165°54'W; sounding, 2450 fm; wind, 330°, force 2; weather, overcast, fog in patches; sea, slight; air temperature, dry 57°, wet 55°; barometer, 1023.2 mb. 63

0	15.0	32.84	5.87	1.10	0	15.0	32.82	5.87	101.0	1.10	24.31	362.0	0.000
10	15.0	32.81	5.92	0.90	10	15.0	32.82	5.92	102.0	0.90	24.31	362.0	0.036
20	12.85	32.89	6.53	1.10	20	12.85	32.89	6.53	108.0	1.10	24.82	314.5	0.070
30	8.52	32.93	7.09	1.05	30	8.52	32.93	7.09	107.0	1.05	25.60	240.0	0.098
40	6.78	32.96	7.12	1.20	50	5.74	33.00	7.09	101.0	1.25	26.03	198.5	0.142
50	5.74	32.91	7.09	1.25	75	5.12	33.07	6.91	96.7	1.30	26.16	186.5	0.190
75	5.12	33.07	6.91	1.30	100	5.00	33.12	6.94	97.0	1.40	26.21	181.5	0.237
100	5.00	33.12	6.94	1.40	150	4.05	33.31	6.85	78.5	1.80	26.46	158.0	0.322
124	4.65	33.17	6.87	1.50	200	4.43	33.75	4.24	58.9	2.05	26.77	128.2	0.395
148	4.05	33.29	5.79	1.80	250	4.18	33.84	3.19	44.0	2.45	26.87	119.0	0.460
197	4.43	33.75	4.30	2.05	300	3.95	33.91	2.21	30.3	2.80	26.95	111.5	0.519
295	3.95	33.91	2.25	2.80	400	3.81	34.03	1.38	18.8	2.95	27.06	101.5	0.629
395	3.81	34.01	1.39	2.95	500	3.70	34.11	1.06	14.5	3.10	27.14	94.0	0.731
595	3.58	34.18	0.91	3.20	600	3.57	34.19	0.91	12.4	3.20	27.21	86.5	0.825
795	3.22	34.30	0.93	3.45	700	3.40	34.25	0.91	12.3	3.35	27.27	81.0	0.914
996	2.87	34.39	0.84	3.45	800	3.20	34.30	0.91	12.3	3.45	27.34	75.0	0.998
1196	2.63	34.43	0.78	3.60	1000	2.87	34.39	0.84	11.3	3.45	27.44	65.0	1.150

HMCS STE. THERESE; August 25, 1955; 1353 GCT; 47°01'N, 164°04'W; sounding, 2960 fm; wind, 340°, force 2; weather, overcast; sea, moderate; air temperature, dry 56°, wet 53°; barometer, 1022.5 mb. 64

0	14.4	32.64	-	1.40	0	14.4	32.62	(6.19)	101.0	1.50	24.29	364.5	0.000
10	14.39	32.62	6.00	1.20	10	14.39	32.62	6.00	102.0	1.25	24.29	364.5	0.036
20	13.97	32.65	6.07	1.25	20	13.97	32.65	6.07	102.0	1.30	24.41	353.2	0.072
30	9.37	32.81	7.00	1.30	30	9.37	32.81	7.00	108.0	1.35	25.38	261.0	0.103
40	7.57	32.86	7.13	1.65	50	5.90	32.88	7.19	102.0	1.75	25.92	209.5	0.150
50	5.90	32.88	7.19	1.65	75	5.57	33.01	6.83	96.8	1.80	26.06	195.8	0.201
74	5.57	33.01	6.83	1.70	100	5.23	33.09	6.45	90.4	1.85	26.16	186.5	0.249
98	5.29	33.08	6.44	1.75	150	4.70	33.43	5.90	82.2	1.90	26.49	155.0	0.336
122	4.64	33.14	6.72	1.75	200	4.68	33.75	4.50	63.0	2.30	26.74	131.0	0.408
147	4.70	33.39	5.99	1.85	250	4.50	33.84	3.36	46.7	2.55	26.84	122.5	0.472
196	4.70	33.75	4.58	2.10	300	4.30	33.91	2.37	32.9	2.70	26.92	115.0	0.534
294	4.32	33.91	2.41	2.60	400	3.86	34.02	1.66	22.7	3.15	27.05	102.8	0.645
392	3.89	34.00	1.68	3.00	500	3.70	34.11	1.12	15.3	3.15	27.14	94.0	0.747
590	3.57	-	0.84	3.00	600	3.55	34.18	0.84	11.5	3.15	27.21	87.0	0.843
790	3.17	34.29	0.73	3.00	700	3.35	34.24	0.77	10.5	3.15	27.27	81.0	0.932
976	2.84	34.37	0.73	3.15	800	3.16	34.29	0.73	9.8	3.20	27.33	75.5	1.017
1141	2.64	34.43	0.83	3.30	1000	2.81	34.37	0.74	9.9	3.25	27.42	66.8	1.171

POG
NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

65 HMCS STE. THERESE; August 25, 1955; 2043 GCT; 47°03'N, 162°24'W; sounding, 2425 fm; wind, calm; weather, overcast; sea, slight; air temperature, dry 57°, wet 54°; barometer, 1024.5 mb.

0	15.0	32.74	6.19	1.25	0	15.0	32.72	6.19	106.0	1.30	24.24	369.2	0.000
10	15.02	32.72	6.12	1.00	10	15.02	32.72	6.12	105.0	1.10	24.24	369.2	0.037
20	14.94	32.71	6.21	1.00	20	14.94	32.72	6.21	107.0	1.10	24.26	367.8	0.074
30	10.02	32.88	6.68	1.25	30	10.02	32.89	6.68	104.0	1.30	25.32	266.0	0.105
40	7.08	33.03	7.29	1.20	50	6.23	33.05	7.12	102.0	1.30	26.00	201.2	0.152
50	6.23	33.01	7.12	1.25	75	6.24	33.08	6.91	99.2	1.55	26.03	198.5	0.202
75	6.24	33.08	6.91	1.50	100	5.83	33.14	6.99	99.5	1.55	26.13	189.0	0.252
100	5.83	33.14	6.99	1.50	150	5.19	33.43	6.45	90.6	1.90	26.44	160.5	0.340
125	5.48	33.22	6.75	1.80	200	5.31	33.82	4.73	66.8	2.05	26.73	132.5	0.414
150	5.19	33.41	6.45	1.65	250	4.88	33.87	3.61	50.5	2.30	26.86	120.0	0.478
198	5.31	33.82	4.77	1.95	300	4.46	33.92	2.74	38.2	2.50	26.90	116.0	0.641
295	4.47	33.89	2.79	2.40	400	4.17	34.03	1.88	26.0	2.75	27.02	104.5	0.652
394	4.19	34.03	1.91	2.70	500	3.93	34.11	1.43	19.6	2.80	27.11	96.5	0.757
594	3.72	34.17	1.12	2.70	600	3.71	34.17	1.11	15.1	3.05	27.18	90.0	0.854
794	3.29	34.29	0.74	3.15	700	3.50	34.23	0.92	12.5	3.10	27.25	83.5	0.946
994	2.90	34.36	0.77	3.15	800	3.28	34.29	0.74	10.0	3.15	27.32	77.0	1.032
1193	2.63	34.43	0.66	3.05	1000	2.90	34.36	0.77	10.4	3.15	27.41	68.0	1.190

66 HMCS STE. THERESE; August 26, 1955; 0459 GCT; 47°06'N, 160°26'W; sounding, 2425 fm; wind, calm; weather, overcast; sea, moderate; air temperature, dry 58°, wet 52°; barometer, 1024.5 mb.

0	14.5	32.69	5.98	1.25	0	14.5	32.69	5.98	102.0	1.30	24.32	361.2	0.000
10	14.40	32.57	5.17	1.10	10	14.40	32.56	5.17	87.8	1.10	24.24	368.5	0.036
20	13.53	32.50	6.12	1.20	20	13.53	32.50	6.12	102.0	1.25	24.38	356.2	0.073
30	9.34	32.76	7.20	1.30	30	9.34	32.76	7.20	110.0	1.30	25.32	266.0	0.104
40	8.29	32.83	6.95	1.30	50	6.01	32.95	7.05	101.0	1.60	25.96	205.5	0.151
50	6.01	32.95	7.05	1.55	75	5.62	33.00	6.66	94.4	1.40	26.05	197.5	0.201
75	5.62	33.00	6.66	1.35	100	5.19	33.13	6.77	95.0	1.50	26.20	182.5	0.250
99	5.19	33.12	6.79	1.40	150	5.20	33.63	5.84	82.3	1.70	26.59	145.0	0.333
123	4.92	33.24	6.56	1.40	200	4.97	33.79	4.52	63.5	1.95	26.75	131.0	0.402
146	5.21	33.58	5.92	1.65	250	4.63	33.85	3.62	50.3	2.30	26.84	122.8	0.467
195	5.00	33.79	4.58	1.90	300	4.33	33.89	2.87	39.7	2.45	26.90	116.8	0.630
294	4.35	33.89	1.79	2.40	400	4.02	34.00	2.09	28.8	2.70	27.02	106.0	0.641
394	4.01	33.98	2.12	2.30	500	3.86	34.09	1.49	20.4	2.95	27.10	97.0	0.748
594	3.68	34.17	1.02	3.00	600	3.69	34.17	1.01	13.8	3.10	27.18	89.5	0.846
794	3.22	34.29	0.74	3.20	700	3.45	34.23	0.83	11.3	3.15	27.26	82.8	0.937
994	2.91	34.36	0.78	3.20	800	3.21	34.28	0.74	10.0	3.20	27.31	77.0	1.023
1193	2.60	34.44	0.75	3.50	1000	2.91	34.37	0.78	10.6	3.30	27.42	67.0	1.178

67 HMCS STE. THERESE; August 26, 1955; 1202 GCT; 47°08.5'N, 158°38'W; sounding, 2850 fm; wind, 240°, force 2; weather, overcast; sea, moderate; air temperature, dry 58°, wet 54°; barometer, 1024.5 mb.

0	14.7	32.72	6.61	1.15	0	14.7	32.70	6.61	113.0	1.15	24.28	365.5	0.000
10	14.74	32.69	5.98	1.00	10	14.74	32.70	5.98	102.0	1.00	24.28	364.5	0.036
20	14.36	32.71	6.01	1.15	20	14.36	32.71	6.01	102.0	1.15	24.37	356.5	0.072
30	10.37	32.86	6.95	1.30	30	10.37	32.86	6.95	109.0	1.30	25.25	273.0	0.104
40	8.99	32.88	6.94	1.40	50	6.47	32.98	7.15	103.0	1.70	25.92	209.0	0.152
50	6.47	32.98	7.15	1.70	75	5.97	33.01	6.91	98.6	1.50	26.02	200.2	0.203
75	5.97	33.01	6.91	1.55	100	5.74	33.08	6.82	97.0	1.60	26.10	192.5	0.253
99	5.76	33.08	6.82	1.60	150	5.61	33.54	6.09	86.6	1.60	26.47	157.2	0.342
123	5.52	33.20	7.26	1.45	200	5.53	33.86	4.59	65.3	1.85	26.73	132.0	0.415
147	5.62	33.51	6.17	1.60	250	5.07	33.88	3.56	50.2	2.20	26.80	125.0	0.480
196	5.57	33.86	4.64	1.85	300	4.61	33.89	2.77	38.5	2.40	26.86	120.0	0.543
293	4.63	33.89	2.81	2.40	400	4.23	34.01	1.91	26.5	2.65	27.00	106.8	0.660
391	4.25	34.01	1.96	2.65	500	3.91	34.10	1.31	17.9	2.80	27.10	97.0	0.766
587	3.67	34.15	0.96	3.30	600	3.62	34.17	0.96	13.1	2.85	27.18	89.0	0.864
789	3.21	34.30	0.75	2.80	700	3.41	34.23	0.84	11.4	2.90	27.27	82.8	0.955
989	2.90	34.36	0.72	3.00	800	3.20	34.29	0.75	10.2	2.95	27.32	76.0	1.041
1185	2.64	34.43	0.74	3.05	1000	2.90	34.37	0.73	9.8	3.00	27.42	67.0	1.196

OBSERVED					INTERPOLATED						COMPUTED			
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	
HMCS STE. THERESE; August 26, 1955; 1948 GCT; 47°10.7'N, 156°51'W; sounding, 2859 fm; wind, calm; weather, overcast; sea, moderate; air temperature, dry 59°, wet 54°; barometer, 1025.5 mb.														68
0	14.0	32.69	6.00	0.75	0	14.0	32.64	6.00	101.0	0.75	24.39	355.0	0.000	
10	13.95	32.64	5.99	0.70	10	13.95	32.64	5.99	101.0	0.70	24.40	354.0	0.018	
20	13.85	32.64	6.06	0.80	20	13.85	32.64	6.06	102.0	0.80	24.42	351.5	0.053	
30	8.93	32.79	6.93	1.00	30	8.93	32.79	6.93	106.0	1.10	25.42	256.8	0.083	
40	6.16	32.88	6.94	1.30	50	5.98	32.89	6.93	98.7	1.30	25.92	209.5	0.130	
49	5.98	32.89	6.93	1.10	75	6.09	33.00	6.83	97.6	1.30	25.99	203.0	0.181	
73	6.09	33.00	6.83	1.30	100	5.91	33.03	6.74	96.0	1.40	26.04	198.5	0.232	
98	5.91	33.03	6.75	1.40	150	5.50	33.64	5.73	81.4	1.45	26.56	148.0	0.320	
122	5.95	33.20	6.62	1.40	200	5.29	33.82	4.41	62.3	1.70	26.73	132.2	0.391	
146	5.52	33.58	5.83	1.45	250	4.90	33.85	3.56	49.9	2.00	26.80	125.8	0.456	
194	5.34	33.82	4.49	1.70	300	4.50	33.89	2.75	38.3	2.25	26.88	118.2	0.518	
293	4.54	33.87	2.82	2.45	400	4.10	34.00	1.76	24.2	2.60	27.00	106.2	0.634	
393	4.12	34.00	1.79	2.60	500	3.88	34.10	1.12	15.3	2.65	27.10	96.8	0.740	
593	3.64	34.17	0.79	2.70	600	3.62	34.17	0.79	10.8	2.70	27.19	89.0	0.837	
793	3.23	34.25	0.64	2.70	700	3.42	34.23	0.72	9.7	2.75	27.26	82.8	0.928	
972	2.94	34.36	0.59	3.00	800	3.22	34.29	0.64	8.6	2.85	27.32	76.2	1.013	
1135	2.68	34.43	0.52	3.00	1000	2.90	34.37	0.59	8.0	3.00	27.42	67.0	1.169	
HMCS STE. THERESE; August 27, 1955; 0316 GCT; 47°11'N, 154°55'W; sounding, 2550 fm; wind, 180°, force 2; weather, cloudy; sea, slight; air temperature, dry 59°, wet 55°; barometer, 1024.5 mb.														69
0	14.2	32.69	5.98	1.15	0	14.2	32.69	5.98	101.0	1.15	24.38	355.2	0.000	
10	14.18	32.69	6.00	-	10	14.18	32.69	6.00	102.0	1.15	24.39	356.5	0.036	
20	12.58	32.76	6.43	1.15	20	12.58	32.76	6.43	106.0	1.15	24.77	318.8	0.069	
30	9.04	32.88	7.30	-	30	9.04	32.88	7.30	111.0	1.50	25.48	251.5	0.098	
39	7.12	32.91	7.15	1.85	50	6.24	32.92	6.91	99.0	1.85	25.90	211.0	0.144	
48	6.24	32.91	6.91	-	75	6.27	33.02	6.81	98.1	1.85	25.98	204.0	0.196	
72	6.27	33.01	6.82	1.85	100	6.05	33.07	6.77	96.6	1.60	26.05	197.0	0.247	
96	6.05	33.07	6.77	-	150	6.09	33.73	5.91	85.3	1.65	26.56	148.5	0.334	
121	5.73	33.15	6.77	1.50	200	5.68	33.84	4.80	68.6	2.00	26.70	135.2	0.406	
145	6.09	33.65	6.01	-	250	5.20	33.89	3.73	52.6	2.30	26.80	126.0	0.472	
195	5.71	33.84	4.90	1.95	300	4.72	33.92	2.93	41.1	2.55	26.87	118.8	0.535	
295	4.76	33.91	2.98	-	400	4.18	33.98	1.99	27.6	3.05	26.98	108.2	0.652	
395	4.18	33.98	2.03	-	500	3.94	34.08	1.32	18.1	3.35	27.08	98.5	0.760	
595	3.72	34.15	0.91	3.50	600	3.70	34.15	0.91	12.4	3.50	27.16	91.0	0.860	
795	3.30	34.27	0.68	-	700	3.50	34.22	0.79	10.8	3.50	27.24	84.0	0.952	
995	2.98	34.37	0.94u	-	800	3.30	34.27	0.68	9.4	3.50	27.30	78.5	1.040	
1195	2.67	34.44	0.66	3.50	1000	2.98	34.37	0.67	9.2	3.50	27.42	67.2	1.197	
HMCS STE. THERESE; August 27, 1955; 0926 GCT; 47°14'N, 153°17'W; sounding, 2550 fm; wind, 170°, force 1; weather, overcast; sea, moderate; air temperature, dry 58°, wet 52°; barometer, 1026.3 mb.														70
0	14.1	32.69	6.05	1.25	0	14.1	32.65	6.05	102.0	1.25	24.37	356.5	0.000	
10	14.01	32.65	6.06	-	10	14.01	32.66	6.06	102.0	1.25	24.40	354.0	0.036	
20	13.80	32.65	6.10	1.25	20	13.80	32.66	6.10	102.0	1.25	24.45	349.2	0.071	
30	10.16	32.77	7.22	-	30	10.16	32.77	7.22	113.0	1.35	25.22	276.5	0.102	
40	8.89	32.91	6.94	1.60	50	6.71	32.91	7.05	102.0	1.55	25.84	217.0	0.151	
49	6.71	32.91	7.05	-	75	6.46	32.98	6.83	98.7	1.45	25.92	209.0	0.204	
74	6.46	32.98	6.83	1.45	100	6.01	33.00	6.91	98.6	1.60	26.00	202.0	0.257	
98	6.04	33.00	6.91	-	150	5.95	33.47	6.20	88.9	1.95	26.38	166.0	0.350	
122	5.85	33.15	6.72	1.80	200	5.65	33.82	5.34	76.3	2.20	26.68	136.5	0.426	
147	5.97	33.44	6.27	-	250	5.17	33.85	4.22	59.6	2.40	26.77	128.8	0.493	
196	5.70	33.82	5.43	2.20	300	4.71	33.88	3.17	44.4	2.60	26.84	121.0	0.558	
294	4.73	33.87	3.25	-	400	4.31	34.00	1.93	26.7	2.95	26.98	108.0	0.676	
392	4.34	34.00	1.96	-	500	4.00	34.10	1.37	18.8	3.15	27.10	98.0	0.784	
585	3.72	34.17	0.94	3.25	600	3.70	34.17	0.92	12.5	3.25	27.18	89.8	0.883	
776	3.31	34.24	0.73	-	700	3.50	34.23	0.82	11.1	3.25	27.24	83.2	0.975	
952	2.97	34.36	0.67	-	800	3.29	34.29	0.73	9.9	3.30	27.32	77.0	1.062	
1100	2.75	34.41	0.65	3.30	1000	2.90	34.38	0.67	9.0	3.30	27.44	66.0	1.217	

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

71 HMCS STE. THERESE; August 27, 1955; 1636, 1653 GCT; 47°19'N, 151°30'W; sounding, 2600 fm; wind, 170°, force 2; weather, overcast; sea, moderate; air temperature, dry 56°, wet 52°; barometer, 1025.5 mb.

0	13.6	32.76	6.09	0	13.6	32.70	6.09	102.0		24.52	342.8	0.000
10	13.57	32.71	6.12	10	13.57	32.71	6.12	102.0		24.54	341.2	0.034
20	13.54	32.67	6.18	20	13.54	32.72	6.18	103.0		24.54	340.0	0.068
30	13.33	32.71	6.12	30	13.33	32.72	6.12	102.0		24.58	336.2	0.102
40	9.22	32.98	6.96	50	7.61	32.98	7.00	103.0		25.76	224.0	0.158
50	7.61	32.98	7.00	75	6.95	33.05	6.79	99.2		25.92	210.0	0.212
74	6.95	33.05	6.79	100	6.61	33.11	6.76	97.9		26.01	201.0	0.265
99	6.61	33.10	6.76	150	6.16	33.31	6.49	93.5		26.23	180.0	0.361
124	5.96	33.15	6.68	200	5.81	33.81	5.06	72.4		26.66	139.0	0.442
149	6.16	33.31	6.52	250	5.22	33.86	3.95	55.8		26.77	128.8	0.511
198	5.87	33.81	5.11	300	4.67	33.89	2.91	41.8		26.86	120.2	0.575
				400	4.35	34.00	1.90	26.4		26.98	108.8	0.692
297	4.68	33.89	2.93	500	4.02	34.09	1.13	15.7		27.08	99.2	0.800
396	-	33.98	1.93	600	3.72	34.16	0.84	11.5		27.17	90.8	0.900
595	3.73	34.17	0.85	700	3.49	34.22	0.75	10.2		27.24	83.8	0.993
794	3.27	34.29	0.65	800	3.25	34.28	0.65	8.8		27.31	77.0	1.079
992	2.97	34.36	0.58	1000	2.95	34.36	0.58	7.8		27.42	67.5	1.237
1191	2.67	34.43	0.60									

72 HMCS STE. THERESE; August 28, 1955; 0003 GCT; 47°23'N, 149°44'W; sounding, 2775 fm; wind, 150°, force 3; weather, overcast; sea, moderate; air temperature, dry 59°, wet 56°; barometer, 1026.7 mb.

0	13.7	32.84	6.16	1.20	0	13.7	32.71	6.16	103.0	1.20	24.50	344.0	0.000
9	13.60	32.71	6.17	-	10	13.60	32.71	6.17	103.0	1.10	24.53	342.0	0.034
19	13.46	32.71	6.32	1.05	20	13.46	32.74	6.40	107.0	1.05	24.57	337.5	0.068
28	10.77	32.93	6.80	-	30	10.77	32.97	6.81	108.0	1.10	25.26	271.5	0.099
38	8.72	33.07	6.92	1.20	50	7.94	33.08	6.81	101.0	1.25	25.80	220.5	0.148
48	7.94	33.08	6.82	-	75	7.12	33.08	6.68	97.9	1.35	25.92	209.5	0.202
72	7.12	33.08	6.68	1.35	100	6.54	33.08	6.77	97.9	1.15	26.00	202.0	0.255
96	6.54	33.08	6.77	-	150	6.10	33.57	6.00	86.6	1.25	26.44	160.5	0.346
120	6.23	33.14	6.79	1.05	200	5.89	33.81	5.12	73.4	1.65	26.65	140.0	0.422
145	6.12	33.50	6.06	-	250	5.33	33.84	4.09	57.9	1.90	26.74	130.8	0.491
194	5.92	33.81	5.20	1.60	300	4.81	33.87	3.11	43.6	2.15	26.82	123.5	0.556
293	4.87	33.87	3.19	-	400	4.25	33.99	1.94	26.8	2.55	26.98	108.0	0.676
393	4.26	33.96	1.97	-	500	4.00	34.09	1.27	17.4	2.85	27.09	98.5	0.783
593	3.80	34.15	0.85	3.05	600	3.79	34.17	0.85	11.6	3.05	27.17	90.8	0.884
793	3.40	34.29	0.62	-	700	3.60	34.23	0.73	9.9	3.15	27.24	84.0	0.976
993	3.01	34.36	0.72	-	800	3.40	34.28	0.62	8.4	3.20	27.30	78.8	1.065
1193	2.74	34.43	0.56	3.20	1000	3.01	34.37	0.72	9.7	3.20	27.40	68.5	1.226

73 HMCS STE. THERESE; August 28, 1955; 0927 GCT; 47°02'N, 147°52'W; sounding, 2649 fm; wind, 150°, force 4; weather, overcast; sea, moderate; air temperature, dry 56°, wet 52°; barometer, 1024.3 mb.

0	13.4	32.71	6.11	1.00	0	13.4	32.69	6.11	102.0	1.00	24.55	340.0	0.000
10	13.42	32.67	6.15	-	10	13.42	32.69	6.15	103.0	0.85	24.55	340.0	0.034
20	13.42	32.69	6.16	0.80	20	13.42	32.69	6.16	103.0	0.80	24.55	340.0	0.068
29	13.12	32.72	6.27	-	30	13.12	32.73	6.46	107.0	0.95	24.64	331.0	0.102
39	9.42	32.91	7.15	1.05	50	8.13	32.92	6.83	102.0	1.15	25.64	235.5	0.158
48	8.13	32.93	6.85	-	75	7.04	32.95	6.74	98.5	1.25	25.82	338.8	0.215
72	7.04	32.95	6.74	1.25	100	6.55	32.96	6.66	96.4	1.25	25.90	211.5	0.269
96	6.55	32.96	6.64	-	150	5.88	33.34	6.20	88.6	1.30	26.29	174.0	0.367
121	6.30	33.03	6.74	1.25	200	5.80	33.76	5.17	74.0	1.40	26.63	142.5	0.447
145	5.88	33.31	6.29	-	250	5.30	33.82	4.03	57.0	1.55	26.74	132.0	0.487
194	5.85	33.75	5.27	1.40	300	4.82	33.88	2.99	41.8	1.80	26.84	122.8	0.522
293	4.84	33.87	3.03	-	400	4.36	33.99	1.99	27.7	2.25	26.98	109.2	0.642
393	4.39	33.96	2.04	-	500	4.05	34.08	1.23	16.9	2.60	27.08	99.5	0.751
593	3.78	34.15	0.85	2.75	600	3.75	34.15	0.85	11.6	2.75	27.16	91.0	0.852
793	3.30	34.27	0.74	-	700	3.51	34.21	0.78	10.7		27.24	85.0	0.946
993	2.97	34.34	0.74	-	800	3.28	34.27	0.74	10.0		27.30	78.5	1.033
1192	2.72	34.41	0.63	-	1000	2.97	34.35	0.74	10.0		27.40	68.8	1.193

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 28, 1955; 1651 GCT; 47°08'N, 146°12'W; sounding, 2600 fm; wind, 150°, force 4; weather, overcast; sea, slight; air temperature, dry 57°, wet 52°; barometer, 1023.0 mb. 74

0	13.0	32.77	6.18	0.90	0	13.0	32.66	6.18	102.0	0.90	24.61	334.0	0.000
10	12.84	32.67	6.36	-	10	12.84	32.67	6.36	105.0	0.90	24.64	330.5	0.033
20	12.26	32.67	6.40	1.00	20	12.26	32.67	6.40	105.0	1.00	24.75	320.5	0.066
29	8.01	32.89	7.15	-	30	8.01	32.89	7.13	106.0	1.20	25.64	236.0	0.094
39	7.14	32.89	6.91	1.30	50	6.19	32.92	6.85	99.8	1.40	25.82	218.5	0.139
48	6.91	32.93	6.85	-	75	6.13	32.93	6.76	96.8	1.55	25.93	208.0	0.192
73	6.18	32.93	6.76	1.55	100	5.69	32.94	6.74	95.6	1.55	25.99	202.8	0.245
97	5.69	32.95	6.77	-	150	5.67	33.65	5.73	81.8	1.45	26.55	149.5	0.334
122	5.62	33.24	6.40	1.45	200	5.37	33.82	4.50	63.8	(1.45)	26.72	132.8	0.405
146	5.70	33.60	5.84	-	250	4.93	33.86	3.45	48.4		26.81	125.0	0.471
196	5.40	33.81	4.57	1.55	300	4.52	33.89	2.50	34.7		26.87	119.0	0.534
293	4.55	33.89	2.55	-	400	4.11	34.00	1.46	20.1		27.01	106.2	0.649
392	4.12	34.00	1.47	-	500	3.86	34.09	0.95	13.0		27.10	97.2	0.755
588	3.65	34.17	0.77	-	600	3.61	34.17	0.76	10.4		27.19	89.0	0.853
784	3.28	34.29	0.69	-	700	3.42	34.23	0.73	9.9		27.26	83.0	0.945
980	2.93	34.36	0.64	-	800	3.23	34.29	0.69	9.4		27.31	77.0	1.031
1175	2.66	34.44	0.55	-	1000	2.90	34.37	0.63	8.4		27.42	66.8	1.187

HMCS STE. THERESE; August 29, 1955; 0130 GCT; 47°09'N, 144°15'W; sounding, 2500 fm; wind, 155°, force 4; weather, overcast; sea, moderate; air temperature, dry 58°, wet 56°; barometer, 1020.4 mb. 75

0	13.9	32.93	5.96	1.05	0	13.9	32.79	5.96	100.0	1.05	24.52	341.8	0.000
10	13.93	32.79	6.15	-	10	13.93	32.79	6.15	103.0	0.80	24.52	342.8	0.034
20	13.58	32.77	6.12	0.70	20	13.58	32.79	6.12	102.0	0.70	24.60	335.2	0.068
30	11.96	32.84	6.57	-	30	11.96	32.84	6.57	107.0	0.85	24.95	301.5	0.100
39	9.20	32.91	6.45	1.20	50	8.41	32.97	6.63	100.0	1.20	25.64	236.0	0.154
49	8.41	32.96	6.63	-	75	7.49	33.02	6.56	96.9	1.25	25.82	219.2	0.211
73	7.49	33.03	6.56	1.25	100	6.85	33.02	6.57	95.9	1.20	25.90	211.0	0.265
97	6.92	33.01	6.61	-	150	5.67	33.46	5.83	98.9	1.25	26.40	163.5	0.360
122	6.22	33.15	6.39	1.20	200	5.50	33.70	4.51	64.1	1.70	26.62	143.5	0.438
146	5.69	33.44	5.96	-	250	5.08	33.82	3.38	47.6	2.05	26.75	130.0	0.508
196	5.55	33.69	4.59	1.65	300	4.67	33.90	2.61	36.5	2.20	26.86	120.0	0.572
295	4.70	33.89	2.65	-	400	4.20	34.01	1.71	23.7	2.40	27.01	106.0	0.585
395	4.22	34.00	1.74	-	500	3.93	34.10	1.06	14.6	2.55	27.10	97.0	0.795
594	3.70	34.17	0.74	2.65	600	3.69	34.17	0.74	10.1	2.65	27.18	89.5	0.893
793	3.35	34.29	0.66	-	700	3.50	34.23	0.69	9.4	2.75	27.24	83.5	0.985
993	3.01	34.37	0.71	-	800	3.32	34.28	0.67	9.1	2.85	27.31	77.5	1.072
1192	2.72	34.44	0.49	3.15	1000	3.01	34.37	0.71	9.5	3.00	27.41	68.5	1.231

HMCS STE. THERESE; August 29, 1955; 0853 GCT; 47°01'N, 142°28'W; sounding, 2600 fm; wind, 150°, force 3; weather, partly cloudy; sea, moderate; air temperature, dry 57°, wet 55°; barometer, 1018.5 mb. 76

0	13.9	32.76	6.06	0.95	0	13.9	32.71	6.06	102.0	0.95	24.46	347.5	0.000
10	13.80	32.71	6.11	-	10	13.80	32.72	6.11	103.0	0.90	24.49	345.0	0.035
20	13.37	32.71	6.24	0.90	20	13.37	32.72	6.24	104.0	0.90	24.58	336.8	0.069
29	11.29	32.79	6.60	-	30	11.29	32.80	6.64	106.0	0.95	25.04	293.5	0.100
39	8.44	32.84	6.90	1.00	50	7.77	32.89	6.63	98.3	1.25	25.68	232.0	0.153
48	7.77	32.89	6.63	-	75	6.82	32.92	6.71	97.6	1.50	25.83	218.0	0.209
73	6.82	32.91	6.71	1.50	100	6.20	32.94	6.81	97.6	1.50	25.92	209.0	0.263
97	6.21	32.89	6.82	-	150	6.00	33.25	6.27	89.7	1.60	26.20	183.0	0.362
122	6.04	32.95	6.70	1.50	200	5.62	33.75	5.04	71.8	2.00	26.64	141.0	0.444
146	6.04	33.20	6.34	-	250	5.29	33.84	3.69	52.2	2.35	26.75	130.5	0.514
195	5.67	33.72	5.12	2.00	300	4.90	33.91	2.65	37.2	2.60	26.85	121.0	0.579
293	4.98	33.91	2.70	-	400	4.24	34.02	1.79	24.8	2.85	27.01	106.5	0.696
391	4.28	34.00	1.85	-	500	4.00	34.10	1.12	15.4	3.00	27.10	97.8	0.803
589	3.76	34.15	0.73	3.05	600	3.73	34.17	0.72	9.8	3.05	27.18	90.0	0.902
786	3.36	34.27	0.64	-	700	3.52	34.23	0.67	9.1	3.05	27.24	83.5	0.994
984	3.02	34.36	0.56	-	800	3.32	34.28	0.63	8.5	3.05	27.30	78.0	1.091
1181	2.71	34.44	0.50	3.05	1000	3.03	34.36	0.56	7.5	3.05	27.40	69.2	1.243

POG
NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	$\delta_{T_3}^{5}$ $10^{-5}cm^3/g$	ΔD dyn. m
77	HMCS STE. THERESE; August 29, 1955; 1651 GCT; 47°06'N, 140°39'W; sounding, 2400 fm; wind, 110°, force 4; weather, cloudy; sea, slight; air temperature, dry 57°, wet 55°; barometer, 1016.5 mb.												
0	14.3	32.77	6.04	0.75	0	14.3	32.70	6.04	102.0	0.75	24.37	356.8	0.000
9	14.25	32.71	6.08	-	10	14.25	32.71	6.10	103.0	0.75	24.39	354.8	0.036
19	14.01	32.69	6.18	0.75	20	14.01	32.71	6.23	105.0	0.75	24.44	350.5	0.071
29	12.62	32.71	6.35	-	30	12.62	32.72	6.42	105.0	0.80	24.72	323.5	0.104
39	8.78	32.84	6.68	1.20	50	7.88	32.94	6.56	97.5	1.20	25.70	230.5	0.160
49	7.88	32.93	6.56	-	75	7.18	32.94	6.52	95.6	1.20	25.80	220.8	0.216
73	7.18	32.96	6.52	1.20	100	6.68	32.94	6.60	95.6	1.30	25.87	214.5	0.271
98	6.74	32.93	6.60	-	150	6.41	33.44	6.52	94.2	1.60	26.29	174.0	0.369
122	5.96	32.89	6.65	1.60	200	6.10	33.82	4.45	64.1	1.95	26.64	141.5	0.449
147	6.42	33.93	6.63	-	250	5.50	33.85	3.73	53.0	2.15	26.73	132.5	0.520
197	6.15	33.82	4.50	1.95	300	4.93	33.87	2.99	41.9	2.35	26.81	124.8	0.586
296	4.96	33.87	3.05	-	400	4.40	33.99	1.84	25.5	2.70	26.97	110.0	0.707
395	4.41	33.98	1.87	-	500	4.10	34.09	1.16	16.0	2.95	27.08	99.5	0.817
593	3.82	34.15	0.78	3.30	600	3.81	34.16	0.78	10.7	3.05	27.16	91.5	0.918
792	3.39	34.29	0.54	-	700	3.59	34.23	0.66	9.0	3.15	27.24	84.0	1.010
990	3.01	34.37	0.56	-	800	3.37	34.28	0.54	7.3	3.20	27.30	78.0	1.099
1188	2.72	34.43	0.43	3.00	1000	3.00	34.37	0.56	7.5	3.25	27.41	68.0	1.258
78	HMCS STE. THERESE; August 30, 1955; 0105 GCT; 47°07'N, 138°52'W; sounding, 2450 fm; wind, 125°, force 3; weather, cloudy; sea, moderate; air temperature, dry 58°, wet 54°; barometer, 1013.5 mb.												
0	14.8	32.76	5.95	0.70	0	14.8	32.72	5.95	102.0	0.70	24.28	365.0	0.000
10	14.6	32.72	6.21	-	10	14.6	32.72	6.21	106.0	0.70	24.32	361.0	0.036
20	14.24	32.71	5.98	0.80	20	14.24	32.72	5.98	101.0	0.80	24.40	353.5	0.072
30	13.28	32.69	5.95	-	30	13.28	32.72	5.95	98.9	0.90	24.60	335.0	0.106
40	9.90	32.79	6.63	1.00	50	8.91	32.88	6.38	97.1	1.15	25.50	249.0	0.165
50	8.91	32.88	6.38	-	75	7.51	32.96	6.48	95.7	1.40	25.77	224.0	0.224
75	7.51	32.96	6.48	1.40	100	7.03	32.96	6.45	94.0	1.50	25.83	218.0	0.280
100	7.03	32.96	6.45	-	150	6.18	33.40	5.90	85.0	1.65	26.30	173.5	0.379
124	6.02	32.89	6.65	1.55	200	6.00	33.79	4.59	65.9	2.00	26.63	142.5	0.459
149	6.18	33.38	5.98	-	250	5.43	33.84	3.72	52.7	2.30	26.73	132.5	0.530
198	6.03	33.79	4.64	2.00	300	4.90	33.89	2.88	40.3	2.55	26.83	122.8	0.595
296	4.94	33.89	2.93	-	400	4.29	33.97	1.70	23.6	2.85	26.96	110.5	0.715
395	4.31	33.96	1.72	-	500	4.07	34.07	1.19	16.2	3.05	27.06	100.8	0.829
590	3.84	34.15	0.88	3.20	600	3.82	34.15	0.86	11.8	3.20	27.16	92.0	0.930
782	3.44	34.29	0.57	-	700	3.61	34.21	0.71	9.6	3.30	27.22	86.0	1.025
979	3.05	34.36	0.55	-	800	3.40	34.28	0.58	7.9	3.40	27.30	79.0	1.115
1177	2.75	34.43	0.52	3.55	1000	3.01	34.37	0.55	7.4	3.50	27.40	68.2	1.275
80	HMCS STE. THERESE; August 30, 1955; 2113 GCT; 47°01'N, 135°16'W; sounding, 2000 fm; wind, 170°, force 4; weather, overcast; sea, moderate; air temperature, dry 64°, wet 60°; barometer, 1009.2 mb.												
0	14.9	32.65	6.01	1.10	0	14.9	32.61	6.01	103.0	1.10	24.18	375.0	0.000
10	14.82	32.62	6.01	-	10	14.82	32.62	6.01	103.0	0.90	24.20	372.8	0.037
20	14.74	32.60	5.91	0.85	20	14.74	32.62	5.91	101.0	0.85	24.22	370.8	0.074
30	14.85	32.62	6.27	-	30	14.85	32.62	6.27	107.0	0.90	24.20	372.8	0.130
40	11.15	32.69	6.87	1.15	50	9.79	32.77	6.52	101.0	1.25	25.27	270.8	0.185
50	9.79	32.77	6.52	-	75	7.21	32.82	6.49	95.2	1.35	25.70	230.5	0.247
75	7.21	32.84	6.49	1.30	100	6.50	32.83	6.40	92.4	1.25	25.80	220.5	0.304
100	6.50	32.83	6.40	-	150	5.72	33.22	5.84	83.1	1.35	26.21	182.0	0.407
125	5.93	32.91	6.40	1.15	200	5.94	33.75	3.82	50.7	1.95	26.60	144.8	0.490
150	5.72	33.22	5.84	-	250	5.38	33.81	3.19	45.2	2.30	26.71	133.8	0.561
200	5.94	33.75	3.82	1.95	300	4.80	33.86	2.56	35.9	2.50	26.82	123.8	0.628
300	4.80	33.86	2.56	-	400	4.30	33.94	1.19	16.4	2.80	26.94	113.0	0.750
400	4.30	33.94	1.19	-	500	4.02	34.04	0.88	12.2	3.00	27.04	102.8	0.862
600	3.77	34.12	0.69	3.05	600	3.77	34.12	0.69	9.5	3.05	27.14	93.8	0.966
800	3.38	34.25	0.52	-	700	3.59	34.19	0.62	8.4	3.05	27.21	87.0	1.062
1000	3.01	34.36	0.44	-	800	3.38	34.25	0.52	7.0	3.05	27.27	80.8	1.216
1200	2.76	34.43	0.43	3.05	1000	3.01	34.35	0.44	6.0	3.05	27.39	70.0	1.318

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

HMCS STE. THERESE; August 31, 1955; 0515 GCT; 47°04'N, 133°22'W; sounding, 2000 fm; wind, 220°, force 5; weather, rain, overcast; sea, rough; air temperature, dry 60°, wet 59°; barometer, 1010.2 mb. 81

0	15.1	32.67	5.64	0.65	0	15.1	32.66	5.64	97.1	0.65	24.17	375.8	0.000
10	15.11	32.69	5.59	-	10	15.11	32.69	5.59	96.1	0.70	24.20	373.5	0.038
20	13.74	32.71	6.19	0.80	20	13.74	32.71	6.19	104.0	0.80	24.50	344.5	0.073
30	10.62	32.72	6.46	-	30	10.62	32.72	6.46	102.0	0.90	25.09	288.2	0.105
40	9.16	32.79	6.79	1.00	50	8.33	32.82	6.72	101.0	1.10	25.54	245.5	0.158
50	8.33	32.83	6.72	-	75	7.42	32.83	6.51	95.7	1.25	25.68	232.5	0.218
75	7.42	32.83	6.51	1.25	100	6.77	32.83	6.45	93.5	1.30	25.78	222.5	0.276
100	6.77	32.83	6.45	-	150	6.13	33.10	6.19	88.6	1.40	26.06	196.0	0.382
125	6.47	32.88	6.44	1.30	200	6.49	33.65	4.83	70.2	1.65	26.45	159.5	0.473
150	6.13	33.10	6.19	-	250	6.02	33.75	4.01	57.6	1.95	26.59	145.8	0.550
200	6.49	33.65	4.83	1.65	300	5.59	33.83	3.12	44.5	2.20	26.70	134.8	0.623
300	5.59	33.87	3.12	-	400	4.82	33.95	1.69	23.7	2.60	26.89	117.5	0.754
400	4.82	33.93	1.69	-	500	4.32	34.05	1.16	16.1	2.85	27.03	105.0	0.870
599	3.99	34.12	0.79	3.00	600	3.99	34.13	0.79	10.9	3.00	27.12	94.8	0.976
799	3.57	34.25	0.53	-	700	3.77	34.19	0.62	8.4	3.05	27.19	88.5	1.074
999	3.20	34.35	0.50	-	800	3.57	34.25	0.53	7.2	3.05	27.26	82.5	1.166
1199	2.84	34.43	0.44	3.15	1000	3.20	34.35	0.50	6.8	3.10	27.37	71.2	1.335

HMCS STE. THERESE; August 31, 1955; 1208, 1253 GCT; 46°59'N, 131°28'W; sounding, 1600 fm; wind, 200°, force 2; weather, cloudy; sea, moderate; air temperature, dry 60°, wet 59°; barometer, 1014.3 mb. 82

0	15.3	32.69	5.82	0.70	0	15.3	32.65	5.82	101.0	0.70	24.12	380.8	0.000
10	15.21	32.64	5.77	-	10	15.21	32.65	5.77	99.4	0.65	24.14	379.0	0.038
20	15.21	32.65	5.70	0.65	20	15.21	32.65	5.70	98.3	0.65	24.14	379.0	0.076
30	14.99	32.65	5.68	-	30	14.99	32.65	5.68	97.5	0.70	24.20	373.8	0.113
39	12.27	32.71	6.43	0.80	50	9.89	32.74	6.76	104.9	0.90	25.23	274.5	0.178
49	9.89	32.74	6.76	-	75	7.85	32.76	6.55	97.3	1.10	25.56	243.0	0.243
74	7.85	32.76	6.55	1.10	100	7.05	32.81	6.36	93.0	1.20	25.71	229.0	0.303
99	7.05	32.81	6.38	-	150	6.84	33.40	5.16	75.5	1.35	26.20	182.5	0.407
123	6.75	33.01	5.99	1.30	200	6.87	33.81	3.43	50.3	1.45	26.52	151.8	0.492
148	6.84	33.38	5.21	-	250	6.12	33.84	3.93	56.7	1.65	26.64	140.8	0.579
197	6.89	33.81	3.96	1.45	300	5.40	33.87	3.46	49.1	1.90	26.76	129.5	0.636
296	5.41	33.87	2.93	-	400	4.55	33.93	1.76	24.5	2.45	26.90	116.0	0.763
396	4.57	33.93	1.78	-	500	4.30	34.04	1.14	15.8	2.80	27.02	105.2	0.880
593	4.03	34.12	0.72	3.00	600	4.03	34.13	0.71	9.7	3.00	27.12	96.0	0.985
792	3.64	34.27	0.35	-	700	3.82	34.20	0.48	6.6	3.05	27.19	88.8	1.084
990	3.29	34.37	0.36	-	800	3.63	34.27	0.36	4.9	3.10	27.26	81.5	1.176
1188	2.99	34.46	0.48	3.10	1000	3.35	34.37	0.37	5.0	3.10	27.38	71.2	1.343

HMCS STE. THERESE; August 31, 1955; 1929 GCT; 46°58'N, 129°48'W; sounding, 1600 fm; wind, 200°, force 4; weather, cloudy; sea, moderate; air temperature, dry 60°, wet 59°; barometer, 1014.3 mb. 83

0	15.5	32.46	5.79		0	15.5	32.43	5.79	100.0		23.90	401.0	0.000
10	15.39	32.43	5.78		10	15.39	32.43	5.78	100.0		23.93	398.0	0.040
20	15.33	32.43	5.73		20	15.33	32.44	5.73	99.0		23.95	397.0	0.080
30	15.34	32.57	5.72		30	15.34	32.57	5.72	99.0		24.05	387.0	0.119
40	14.01	32.58	6.16		50	11.79	32.65	6.75	109.0		24.84	312.5	0.189
50	11.79	32.65	6.75		75	7.99	32.69	6.51	96.8		25.49	250.0	0.259
75	7.99	32.60	6.51		100	7.32	32.72	5.65	82.9		25.61	239.0	0.322
99	7.32	32.72	5.65		150	6.82	33.55	4.34	63.6		26.32	170.5	0.426
124	6.78	33.15	5.45		200	6.44	33.84	3.46	50.2		26.60	144.5	0.506
148	6.84	33.55	4.34		250	5.83	33.86	2.93	42.0		26.70	135.2	0.577
198	6.48	33.84	3.46		300	5.21	33.88	2.40	33.8		26.78	127.0	0.645
296	5.25	33.88	2.40		400	4.65	33.98	1.46	20.4		26.94	113.0	0.770
393	4.68	33.98	1.46		500	4.42	34.08	0.90	12.4		27.04	103.5	0.884
585	4.23	34.19	0.53		600	4.20	34.17	0.53	7.3		27.14	94.0	0.988
776	3.72	34.31	0.41		700	3.92	34.24	0.47	6.5		27.22	86.0	1.084
962	3.30	34.37	0.38		800	3.67	34.30	0.41	5.7		27.28	79.8	1.174
					1000	3.21	34.40	0.38	5.2		27.41	68.0	1.336

POG
NORPAC

OBSERVED					INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	O_2 ml/L	O_2 % Sat.	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
84	HMCS STE. THERESE; September 1, 1955; 0313 GCT; 47°01'N, 128°01'W; sounding, 1450 fm; wind, 145°, force 4; weather, drizzle; sea, moderate; air temperature, dry 61°, wet 61°; barometer, 1018.5 mb.												
0	15.5	32.28	6.26	0.70	0	15.5	32.28	6.26	109.0	0.70	23.80	411.2	0.000
10	15.51	32.29	5.61	-	10	15.51	32.30	5.61	97.3	0.50	23.82	410.0	0.041
20	15.47	32.31	6.83	0.40	20	15.47	32.30	6.83	118.0	0.40	23.87	404.0	0.082
30	13.6	32.31	6.28	-	30	13.6	32.30	6.28	105.0	0.55	24.22	371.0	0.121
40	10.41	32.45	6.95	0.70	50	8.47	32.47	6.51	97.8	0.80	25.24	273.5	0.185
50	8.47	32.48	6.51	-	75	7.03	32.48	6.23	90.6	1.10	25.45	253.5	0.251
75	7.03	32.48	6.23	1.10	100	6.83	32.96	5.21	75.7	1.25	25.86	215.0	0.310
100	6.83	33.00	5.21	-	150	7.06	33.67	3.38	49.3	1.55	26.38	165.0	0.408
124	6.80	33.29	4.86	1.40	200	6.60	33.85	2.94	43.0	1.85	26.59	145.0	0.486
149	7.06	33.67	3.39	-	250	6.03	33.88	2.54	36.2	2.10	26.69	136.0	0.559
199	6.60	33.86	2.94	1.85	300	5.51	33.90	2.14	30.2	2.25	26.77	128.8	0.627
298	5.52	33.91	2.15	-	400	5.05	34.00	1.12	15.7	2.40	26.90	116.2	0.753
397	5.06	34.01	1.13	-	500	4.70	34.08	0.75	10.5	2.55	27.00	106.0	0.869
596	4.36	34.17	0.55	2.60	600	4.35	34.16	0.54	7.5	2.60	27.11	96.5	0.976
795	3.77	34.29	0.38	-	700	4.05	34.22	0.46	6.3	2.70	27.18	89.5	1.075
995	3.33	34.37	0.47	-	800	3.76	34.28	0.39	5.4	2.85	27.26	81.5	1.168
1193	2.95	34.44	0.46	3.00	1000	3.32	34.36	0.47	6.4	2.90	27.37	71.5	1.337
85	HMCS STE. THERESE; September 1, 1955; 0934 GCT; 47°42'N, 126°37'W; sounding, 1100 fm; wind, 140°, force 4; weather, overcast, drizzle; sea, moderate; air temperature, dry 62°, wet 60°; barometer, 1020.3 mb.												
0	16.4	32.10	5.70	0.30	0	16.4	32.09	5.70	100.0	0.30	24.09	383.2	0.000
10	16.37	32.09	5.65	-	10	16.37	32.09	5.65	99.4	0.25	24.10	382.0	0.038
20	15.96	32.07	5.72	0.25	20	15.96	32.09	5.72	99.8	0.25	24.18	374.0	0.076
30	12.2	32.21	6.16	-	30	12.2	32.21	6.16	99.8	0.30	24.41	352.5	0.112
40	9.4	32.31	6.68	0.55	50	8.76	32.43	6.05	91.4	0.70	25.17	280.5	0.176
50	8.76	32.43	6.05	-	75	7.21	32.62	5.88	86.1	1.00	25.54	245.2	0.241
75	7.21	32.62	5.88	1.00	100	7.19	33.20	4.42	65.1	1.40	26.00	201.5	0.298
100	7.19	33.20	4.42	-	150	7.10	33.79	2.89	41.7	1.85	26.48	156.5	0.389
124	7.34	33.60	3.42	1.80	200	6.64	33.89	2.23	32.2	1.90	26.62	143.0	0.465
149	7.10	33.79	2.92	-	250	6.15	33.93	1.98	28.6	2.00	26.71	134.0	0.536
198	6.64	33.89	2.24	1.90	300	5.72	33.96	1.69	24.1	2.15	26.79	126.8	0.602
297	5.73	33.96	1.72	-	400	5.17	34.03	0.55	7.7	2.50	26.92	114.8	0.727
396	5.19	34.03	0.56	-	500	4.78	34.11	0.50	7.1	2.75	27.02	105.0	0.841
596	4.40	34.15	0.45	2.90	600	4.39	34.18	0.45	6.2	2.90	27.12	95.0	0.947
794	3.90	34.30	0.30	-	700	4.12	34.24	0.37	5.1		27.20	88.5	1.044
993	3.49	34.37	0.29	-	800	3.90	34.28	0.30	4.1		27.24	83.2	1.137
1192	3.07	34.44	0.46	-	1000	3.49	34.37	0.29	4.0		27.36	72.5	1.307

OBSERVATIONS OF THE TOKAI REGIONAL FISHERIES RESEARCH LABORATORY

OBSERVED							INTERPOLATED			COMPUTED			
Z m	W ±	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m	
TENYO MARU; July 17, 1955; 2200-2238 GCT; 34°54'N, 140°02'E; 0207 x 259 xx xx xxxx 1 21-02 2 350-3 xx 1 1 x.													1
0		26.6	34.49				0	26.6	34.49	22.48	537	0.000	
10	2	26.43	34.25				10	26.43	34.25	22.36	549	0.054	
25	2	26.32	34.25				25	26.32	34.25	22.38	547	0.136	
50	2	20.17	34.49				50	20.17	34.49	24.34	360	0.250	
75	2	18.76	34.56				75	18.76	34.56	24.76	320	0.336	
98	10	17.77	34.60				100	17.77	34.60	25.05	292	0.413	
146	10	14.79	34.56				150	14.79	34.56	25.70	230	0.545	
195	10	12.49	34.47				200	12.48	34.47	26.11	191	0.653	
293	10	10.77	34.45				300	(10.76)	(34.45)	(26.42)	(162)	(0.835)	
TENYO MARU; July 18, 1955; 0005-0100 GCT; 34°59'N, 140°21'E; 0511 x 268 xx xx xxxx 1 15 2 400-3 1 1 x.													2
0		27.0	34.18	5.08			0	27.0	34.18	22.12	572	0.000	
10	2	26.88	34.13	5.71			10	26.88	34.13	22.12	572	0.057	
25	2	25.48	34.45	6.67			25	25.48	34.45	22.80	507	0.138	
50	2	23.41	34.54	6.94			50	23.41	34.54	23.49	441	0.257	
75	2	20.93	34.52	6.05			75	20.93	34.52	24.14	379	0.360	
98	7	18.81	34.56	6.13			100	18.70	34.56	24.77	319	0.448	
147	7	14.56	34.60	5.95			150	14.25	34.60	25.83	218	0.584	
197	7	12.11	34.45	-			200	11.90	34.45	26.21	182	0.686	
296	7	9.99	34.49	3.81			300	(9.87)	(34.49)	(26.60)	(145)	(0.855)	
TENYO MARU; July 18, 1955; 0600-0717 GCT; 35°00'N, 141°20'E; 0511 x x xx xx xxxx 1 x 2 xx xx 1 x.													3
0		28.0					0	28.0					
10	11	27.73					10	27.73					
25	11	27.75					25	27.75					
50	11	24.93					50	24.93					
74	11	22.58					75	22.56					
97	12	22.05					100	21.50					
146	12	19.54	34.85				150	19.48	34.85	24.80	316		
195	12	19.33	34.79				200	18.93	34.79	24.90	307		
292	12	16.64	34.78				300	16.30	34.76	25.52	248		
351	36	14.72	34.61				400	13.60	34.54	25.92	210		
441	36	11.73	34.47				500	9.50	34.38	26.57	148		
532	36	8.86	34.31				600	7.61	34.31	26.82	124		
705	38	6.33	34.31				800	5.00	34.33	27.16	92		
885	38	4.37	34.36				1000	4.23	34.40	27.30	79		
1345	38	2.68	34.49										
TENYO MARU; July 29-30, 1955; 2350-0020 GCT; 42°47'N, 144°59'W; 0507 x 164 xx xx xxxx 1 11-23 6 108-3 xx 1 1 x.													4
0		14.3	33.51				0	14.3	33.51	24.93	304	0.000	
10	22	13.64	33.55				10	13.64	33.55	25.16	282	0.029	
25	22	9.14	33.57				25	9.14	33.57	26.00	202	0.066	
50	22	8.92	33.55				50	8.92	33.55	26.02	200	0.116	
71	22	8.44	33.60				75	8.40	33.60	26.13	190	0.165	
84	22	8.21	33.62				90	(8.00)	(33.62)	(26.21)	(182)	(0.193)	

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ‰°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
5		TENYO MARU; July 30, 1955; 0550-0700 GCT; 43°00'N, 146°00'E; 1104 x 158 xx xx xxxx 1 x 5 1600-3 xx 1 1.										
0		14.4	33.06	6.69	0.6		0	14.4	33.06	24.62	333	0.000
10	4	8.45	33.06	7.59	-		10	8.45	33.06	25.70	230	0.028
25	4	5.02	33.06	7.08	-		25	5.02	33.06	26.16	187	0.059
50	4	1.96	33.12	6.73	1.4		50	1.96	33.12	26.50	154	0.102
75	4	1.21	33.24	6.73	-		75	1.21	33.24	26.64	141	0.139
100	4	1.09	33.24	-	1.1		100	1.09	33.24	26.66	139	0.174
149	3	0.82	33.30	-	-		150	0.84	33.30	26.71	135	0.242
199	3	1.08	33.48	5.56	1.1		200	1.10	33.48	26.83	123	0.307
299	3	1.57	33.64	3.67	-		300	1.60	33.64	26.93	114	0.427
398	3	2.13	33.78	2.79	1.2		400	2.14	33.78	27.01	106	0.538
493	8	2.53	33.95	2.13	-		500	2.53	33.95	27.11	97	0.640
591	8	2.61	33.93	2.08	1.2		600	2.58	34.01	27.16	92	0.736
690	8	2.60	34.09	1.53	1.3		800	2.38	34.20	27.33	76	0.911
888	8	2.19	34.31	0.95	1.2		1000	2.20	34.34	27.44	65	1.061
1480	8	2.23	34.51	1.30	1.0		1500	(2.23)	(34.51)	(27.58)	(52)	(1.388)
6		TENYO MARU; July 30, 1955; 1951-2127 GCT; 43°00'N, 148°00'E; 1117 x 172 xx xx xxxx 1 xx x xx xx 1 1 x.										
0		19.0	33.37	6.19			0	19.0	33.37	23.80	411	0.000
10	10	18.77	33.49	6.21			10	18.77	33.49	23.95	397	0.040
25	10	10.08	33.12	6.79			25	10.08	33.12	25.50	249	0.089
50	10	3.70	33.12	7.24			50	3.70	33.12	26.38	166	0.141
74	10	1.52	33.22	7.20			75	1.52	33.22	26.61	144	0.180
97	12	1.04	33.22	7.13			100	1.04	33.22	26.65	140	0.215
145	12	1.05	33.30	5.84			150	1.10	33.30	26.70	135	0.284
192	12	1.45	33.42	4.12			200	1.46	33.42	26.77	129	0.351
292	12	1.53	33.60	1.39			300	1.60	33.60	26.90	117	0.475
368	27	2.02	33.70	0.92			400	2.27	33.82	27.02	105	0.587
461	27	2.79	33.95	1.02			500	2.90	34.02	27.14	94	0.689
555	27	3.00	34.09	0.56			600	3.00	34.20	27.27	81	0.779
745	27	2.90	34.31	0.68			800	2.82	34.31	27.38	71	0.940
877	40	2.78	-	0.84			1000	2.65	34.38	27.49	60	1.102
1332	40	2.37	34.49	1.34			1500	2.25	34.51	27.58	52	1.417
1792	40	2.02	34.56	-								
7		TENYO MARU; July 31, 1955; 1030-1200 GCT; 43°00'N, 150°00'E; 1311 x 162 xx xx xxxx 1 x x xx xx 1 1 x.										
0		14.3	32.92	6.19	-		0	14.3	32.92	24.54	341	0.000
10	14	14.00	32.88	6.21	-		10	14.00	32.88	24.57	338	0.034
25	14	6.20	33.04	6.79	-		25	6.20	33.04	26.00	202	0.075
50	14	1.87	33.17	7.24	-		50	1.87	33.17	26.54	151	0.119
73	14	1.17	33.24	7.20	-		75	1.17	33.24	26.65	140	0.155
96	15	1.04	33.24	7.13	1.9		100	1.10	33.26	26.66	139	0.190
144	15	1.27	33.42	5.84	-		150	1.40	33.44	26.79	127	0.257
193	15	2.05	33.60	4.12	2.1		200	2.15	33.60	26.87	119	0.318
289	15	2.81	33.95	1.39	-		300	2.90	33.96	27.09	98	0.419
376	22	3.03	33.98	1.02	-		400	3.00	34.00	27.11	97	0.519
471	22	2.97	34.09	0.92	2.2		500	2.97	34.14	27.22	86	0.613
567	22	2.97	34.31	0.56	2.3		600	2.92	34.33	27.38	71	0.696
753	24	2.70	34.40	0.68	2.6		800	2.64	34.42	27.48	62	0.838
944	24	2.47	34.47	0.84	2.6		1000	2.42	34.47	27.54	56	0.966
1428	24	2.07	34.54	1.34	1.9		1500	2.05	34.54	27.63	47	1.255
1920	24	1.91	34.54	-	2.3		2000	(1.88)	(34.54)	(27.65)	(45)	(1.523)

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	ϟ°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

TENYO MARU; July 31, 1955; 1940-2040 GCT; 43°00'N, 152°00'E; 1111 x 176 xx xx xxxx 1 13-14 x xx xx 1 1. 8

0		14.7	32.88			0	14.7	32.88	24.42	352	0.000
10	13	14.49	32.88			10	14.49	32.88	24.46	348	0.035
25	13	6.55	33.04			25	6.55	33.04	26.00	202	0.076
50	13	2.08	33.22			50	2.08	33.22	26.57	148	0.120
73	13	1.40	33.24			75	1.37	33.24	26.64	141	0.156
96	13	1.09	33.24			100	1.11	33.24	26.65	140	0.191
144	15	1.22	33.42			150	1.36	33.42	26.77	129	0.259
193	15	2.37	33.75			200	2.44	33.77	26.97	110	0.319
289	15	2.99	33.96			300	3.00	33.98	27.10	98	0.424
368	27	3.08	34.11			400	3.02	34.13	27.21	87	0.518
466	27	2.91	34.16			500	2.91	34.20	27.28	80	0.610
555	27	2.90	34.27			600	2.85	34.29	27.35	74	0.685
748	27	2.70	-			800	2.63	34.41	27.48	62	0.829
923	36	2.47	34.49			1000	2.41	34.49	27.55	55	0.955
1392	36	2.09	34.54			1500	2.06	34.56	27.64	45	1.236
1865	36	1.88	34.63								

TENYO MARU; August 1, 1955; 0750-0900 GCT; 42°59'N, 154°18'E; 1517 x 188 xx xx xxxx 2 x x xx xx 1 1 x. 9

0		18.2	34.00			0	18.2	34.00	24.48	347	0.000
10	0	17.95	34.00			10	17.95	34.00	24.54	341	0.034
25	0	13.61	33.62			25	13.61	33.62	25.22	276	0.081
50	0	9.70	34.07			50	9.70	34.07	26.31	172	0.137
75	0	8.46	34.05			75	8.46	34.05	26.48	156	0.178
100	0	7.58	34.07			100	7.58	34.07	26.63	142	0.216
148	7	6.02	-			150	5.94	33.89	26.68	137	0.287
197	7	4.17	33.73			200	4.14	33.73	26.78	128	0.354
296	7	3.12	33.77			300	3.14	33.77	26.91	116	0.477
395	7	3.61	34.00			400	3.60	34.00	27.05	102	0.589
498	3	3.38	34.05			500	3.41	34.05	27.11	97	0.691
597	3	3.73	34.31			600	3.71	34.31	27.29	80	0.784
796	3	2.74	34.38			800	2.74	34.38	27.44	65	0.038
995	3	2.53	34.52			1000	2.51	34.52	27.57	53	1.067
1490	4	2.12	34.65			1500	2.11	34.65	27.71	40	1.332
1985	4	1.91	34.65			2000	(1.90)	(34.65)	(27.73)	(38)	(1.565)

TENYO MARU; August 1, 1955; 1640-1800 GCT; 43°00'N, 156°00'E; 1807 x 176 xx xx xxxx 1 x x xx xx 1 1. 10

0		17.1	33.55	5.63	0.5	0	17.1	33.55	24.40	354	0.000
10	21	16.93	33.66	5.60	-	10	16.93	33.66	24.52	343	0.035
25	21	13.06	33.91	6.20	-	25	13.06	33.91	25.56	244	0.071
49	21	9.15	33.95	5.66	1.1	50	9.00	33.95	26.32	172	0.124
71	21	5.79	33.68	6.21	-	75	5.40	33.68	26.60	145	0.163
96	21	4.93	33.64	6.03	1.2	100	4.90	33.64	26.63	142	0.226
188	21	3.20	33.62	5.35	1.8	150	3.90	33.64	26.72	134	0.296
282	21	2.58	33.68	3.69	-	200	3.10	33.62	26.80	126	0.362
378	21	3.22	33.95	2.77	1.8	300	2.60	33.69	26.90	117	0.484
451	32	3.44	34.09	1.54	-	400	3.31	33.98	27.07	104	0.597
543	32	3.67	34.27	0.48	2.3	500	3.54	34.18	27.20	88	0.696
728	32	2.74	34.29	0.77	2.4	600	3.52	34.27	27.27	81	0.785
915	32	2.64	34.40	0.76	2.3	800	2.66	34.31	27.39	70	0.946
1385	32	2.66	34.52	1.58	2.3	1000	2.65	34.42	27.47	62	1.089
1855	32	2.03	34.61	1.65	2.3	1500	2.51	34.56	27.50	60	1.430

TRFRL

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
11		TENYO MARU; August 2, 1955; 0300-0440 GCT; 43°00'N, 158°00'E; 1817 x 183 xx xx xxxx x 19 3 xx xx 1 1.										
0		17.4	33.62				0	17.4	33.62	24.38	356	0.000
10	14	17.08	33.64				10	17.08	33.64	24.47	348	0.035
25	14	16.61	33.95				25	16.61	33.95	24.81	315	0.085
50	14	9.96	33.77				50	9.96	33.77	26.02	200	0.150
73	14	8.90	34.13				75	8.87	34.13	26.48	156	0.194
96	14	8.06	34.11				100	8.00	34.11	26.60	144	0.232
145	14	7.37	34.00				150	7.30	33.98	26.60	144	0.306
193	14	5.40	33.80				200	4.95	33.80	26.75	131	0.376
290	14	3.55	33.77				300	3.55	33.78	26.88	118	0.503
387	14	3.79	33.95				400	3.79	33.96	27.00	107	0.618
465	25	3.78	34.07				500	3.78	34.11	27.12	96	0.723
560	25	3.77	34.18				600	3.77	34.24	27.22	86	0.819
750	25	3.04	34.31				800	2.90	34.33	27.38	71	0.986
940	25	2.91	34.40				1000	2.88	34.42	27.45	64	1.132
1363	33	2.24	34.49				1500	2.20	34.51	27.59	51	1.462
1850	33	1.96	34.61									
12		TENYO MARU; August 2, 1955; 1500-1620 GCT; 43°00'N, 160°00'E; 1804 x 181 xx xx xxxx x x x xx xx 1 1 x.										
0		17.3	34.02				0	17.3	34.02	24.71	325	0.000
10	0	17.18	33.98				10	17.18	33.98	24.70	326	0.033
25	0	13.98	34.33				25	13.98	34.33	25.69	231	0.074
50	0	12.12	34.40				50	12.12	34.40	26.10	192	0.128
75	0	10.60	34.31				75	10.60	34.31	26.32	172	0.173
100	0	10.00	34.31				100	10.00	34.31	26.43	161	0.215
148	4	6.07	33.77				150	5.90	33.77	26.61	144	0.293
198	4	4.73	33.71				200	4.69	33.71	26.71	135	0.363
297	4	4.54	33.77				300	4.50	33.77	26.79	127	0.496
397	4	3.54	33.86				400	3.56	33.86	26.94	113	0.619
499	2	3.65	34.02				500	3.64	34.02	27.06	101	0.729
598	2	3.49	34.13				600	3.43	34.13	27.17	91	0.879
798	2	3.17	34.29				800	3.13	34.29	27.33	76	1.006
997	2	2.92	34.36				1000	2.87	34.36	27.41	68	1.161
1496	2	2.33	34.49				1500	2.30	34.49	27.56	54	1.502
1995	2	2.15	34.58				2000	(2.14)	(34.58)	(27.65)	(45)	(1.783)
13		TENYO MARU; August 3, 1955; 0553-0900 GCT; 43°00'N, 162°00'E; 1807 x 183 xx xx xxxx 1 11 6 xx xx 1 1 x.										
0		14.8	33.84	5.94	0.5		0	14.8	33.84	25.14	284	0.000
10	10	14.51	33.69	6.64	-		10	14.51	33.69	25.09	288	0.029
25	10	12.63	33.68	6.43	-		25	12.63	33.68	25.45	254	0.069
50	10	8.45	33.66	7.10	1.0		50	8.45	33.66	26.17	186	0.125
74	10	6.14	33.53	6.83	-		75	6.12	33.53	26.40	164	0.168
98	10	5.44	33.60	6.74	1.1		100	5.23	33.60	26.56	149	0.208
143	17	4.59	33.62	6.95	-		150	4.60	33.62	26.65	140	0.280
191	17	4.99	33.69	6.66	1.1		200	4.91	33.69	26.67	138	0.350
287	17	3.89	33.78	4.01	-		300	3.72	33.78	26.86	120	0.481
383	17	3.25	33.86	3.18	2.3		400	3.27	33.87	26.98	109	0.598
476	19	3.48	34.04	2.57	-		500	3.51	34.05	27.10	98	0.704
573	19	3.52	34.14	1.34	2.5		600	3.45	34.16	27.20	88	0.801
766	19	3.23	34.29	1.01	2.4		800	3.21	34.31	27.34	75	0.974
960	19	2.91	34.40	0.73	2.5		1000	2.82	34.40	27.45	64	1.125
1418	25	2.31	34.49	1.09	2.5		1500	(2.20)	34.49	(27.57)	(53)	(1.453)
1895	25	-	34.58	1.57	2.4							

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W x°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

TENYO MARU; August 3, 1955; 1910-2035 GCT; 43°00'N, 164°00'E; 2004 x 152 xx xx xxxx 1 7 6 xx xx 1 1 x. 14

0		14.7	33.26				0	14.7	33.26	24.71	325	0.000
10	28	14.32	33.26				10	14.32	33.26	24.80	316	0.032
25	28	10.09	33.51				25	10.09	33.51	25.80	221	0.080
50	28	6.98	33.55				50	6.98	33.55	26.30	173	0.141
69	28	5.89	33.68				75	5.89	33.71	26.56	149	0.181
91	28	5.88	33.82				100	5.75	33.80	26.65	140	0.218
136	28	5.12	33.69				150	5.15	33.73	26.67	138	0.288
184	28	5.24	33.82				200	5.08	33.82	26.75	131	0.356
274	28	3.79	33.82				300	3.70	33.84	26.91	116	0.481
367	28	3.61	33.86				400	3.60	33.86	26.94	113	0.598
455	30	3.54	34.04				500	3.48	34.04	27.09	98	0.707
548	30	3.46	-				600	3.40	34.16	27.20	88	0.804
735	30	3.26	34.25				800	3.12	34.29	27.31	78	0.980
915	30	2.95	34.38				1000	2.78	34.38	27.43	66	1.135
1388	32	2.35	-				1500	2.31	34.49	27.56	54	1.471
1860	32	2.06	34.58									

TENYO MARU; August 4, 1955; 0524-0625 GCT; 43°00'N, 166°00'E; 1504 x 153 xx xx xxxx 1 15 5 xx xx x x x. 15

0		13.8	32.94				0	13.8	32.94	24.65	330	0.000
10	1	11.31	32.94				10	11.31	32.94	25.12	286	0.031
25	1	8.40	33.19				25	8.40	33.19	25.81	220	0.069
50	1	3.65	33.33				50	3.65	33.33	26.52	153	0.115
75	1	3.52	33.37				75	3.52	33.37	26.56	149	0.153
100	1	3.51	33.46				100	3.51	33.46	26.62	143	0.190
150	1	4.45	33.69				150	4.45	33.69	26.72	134	0.259
200	1	3.54	33.73				200	3.54	33.73	26.84	122	0.324
300	1	3.13	33.86				300	3.13	33.86	27.00	107	0.439
400	1	3.52	34.04				400	3.52	34.04	27.09	98	0.543
500	2	3.40	34.14				500	3.40	34.14	27.19	89	0.634
599	2	3.25	34.23				600	3.20	34.24	27.27	81	0.723
798	2	2.95	34.40				800	2.95	34.40	27.43	66	0.880
998	2	2.71	34.54				1000	2.69	34.54	27.57	53	1.011
1483	8	2.21	34.58				1500	2.20	34.58	27.64	46	1.294
1980	8	1.91	34.60				2000	(1.90)	(34.60)	(27.68)	(43)	(1.556)

TENYO MARU; August 4, 1955; 644-1929 GCT; 43°00'N, 168°00'E; 1807 x 166 xx xx xxxx 1 13 5-6 xx xx 1 1. 16

0		13.6	32.81	6.14	1.3		0	13.6	32.81	24.62	335	0.000
10	14	11.96	32.81	6.87	-		10	11.96	32.81	24.92	305	0.032
25	14	6.86	33.15	7.31	-		25	6.86	33.15	26.00	202	0.070
50	14	4.31	33.01	7.45	1.4		50	4.31	33.01	26.20	183	0.118
73	14	2.75	33.33	7.17	-		75	2.76	33.33	26.60	145	0.159
96	14	2.88	33.33	7.18	1.3		100	2.87	33.33	26.59	146	0.196
131	35	2.75	33.37	7.05	-		150	2.78	33.50	26.73	133	0.265
175	35	2.91	33.66	4.82	3.3		200	2.93	33.71	26.89	117	0.328
264	35	2.94	33.82	3.64	-		300	3.04	33.87	27.01	106	0.441
353	35	3.27	34.00	1.96	2.5		400	3.28	34.02	27.10	98	0.545
444	35	3.28	34.04	0.67	-		500	3.28	34.04	27.11	97	0.645
535	35	3.28	34.04	0.93	2.7		600	3.22	34.15	27.20	88	0.741
694	41	3.13	34.31	0.76	2.3		800	2.97	34.36	27.40	69	0.908
874	41	2.71	34.43	0.75	2.5		1000	2.60	34.47	27.52	58	1.046
1298	45	2.33	34.56	1.02	2.1		1500	2.15	34.56	27.64	46	1.340
1760	45	2.08	34.58	1.41	-							

		OBSERVED						INTERPOLATED			COMPUTED		
	Z m	W x°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
17	TENYO MARU; August 5, 1955; 0442-0631 GCT; 43°00'N, 170°00'E; 1807 x 168 xx xx xxxx 1 13 x xx xx 1 1 x.												
	0		13.9	33.10				0	13.9	33.10	24.76	320	0.000
	10	7	11.03	33.13				10	11.03	33.13	25.34	265	0.029
	25	7	9.33	33.33				25	9.33	33.33	25.79	222	0.066
	50	7	6.24	33.51				50	6.24	33.51	26.36	168	0.115
	74	7	5.54	33.57				75	5.53	33.57	26.50	154	0.155
	98	7	5.44	33.60				100	5.40	33.60	26.54	151	0.193
	145	11	4.97	33.57				150	4.91	33.57	26.57	148	0.269
	195	11	4.52	33.66				200	4.50	33.66	26.69	137	0.341
	293	11	3.99	33.82				300	3.92	33.82	26.88	118	0.470
	390	11	3.53	33.91				400	3.53	33.93	27.00	107	0.585
	472	22	3.56	34.04				500	3.55	34.05	27.10	98	0.691
	566	22	3.53	34.20				600	3.47	34.18	27.22	86	0.786
	758	22	3.15	34.29				800	3.02	(34.29)	(27.34)	(75)	(0.957)
	952	22	2.88	-				1000	2.82	(34.34)	(27.40)	(69)	(1.113)
	1462	15	2.34	-				1500	2.28	(34.47)	(27.55)	(55)	(1.462)
	1952	15	2.06	34.58									
18	TENYO MARU; August 5, 1955; 1540-1654 GCT; 43°17'N, 172°09'E; 1304 x 162 xx xx xxxx 2 x x xx 01-10 1 1 x.												
	0		14.5	33.19				0	14.5	33.19	24.70	326	0.000
	10	8	13.70	33.33				10	13.70	33.33	24.98	299	0.031
	25	5	10.79	33.42				25	10.79	33.42	25.60	240	0.071
	50	5	8.04	33.62				50	8.04	33.62	26.20	183	0.125
	75	5	6.21	33.55				75	6.21	33.55	26.40	164	0.168
	99	5	6.22	33.69				100	6.13	33.69	26.52	153	0.208
	148	8	5.88	33.77				150	5.81	33.77	26.63	142	0.283
	197	8	5.31	-				200	5.24	33.80	26.71	134	0.351
	295	8	3.97	33.86				300	3.95	33.86	26.90	117	0.479
	396	8	3.75	33.86				400	3.70	33.86	26.92	115	0.597
	490	10	3.60	34.07				500	3.52	34.07	27.15	93	0.704
	588	10	3.06	34.22				600	3.08	34.22	27.28	80	0.794
	785	10	3.20	34.34				800	3.18	34.34	27.36	73	0.957
	983	10	2.87	34.40				1000	2.80	34.40	27.43	66	1.108
	1492	4	2.25	34.58				1500	2.20	34.58	27.62	48	1.429
	1990	4	1.95	34.58				2000	(1.94)	(34.58)	(27.67)	(44)	(1.699)
19	TENYO MARU; August 5, 1955; 0158-0340 GCT; 43°33'N, 174°15'E; 1304 x 171 xx xx xxxx 2 14 4 xx 01-10 1 1 x.												
	0		15.4	32.97	6.12	1.3	8.2	0	15.4	32.97	24.34	360	0.000
	10	9	13.87	32.97	6.25	-	8.2	10	13.87	32.97	24.66	329	0.034
	25	9	10.32	33.19	6.74	-	8.3	25	10.32	33.19	26.51	248	0.070
	50	9	7.12	33.35	6.70	1.4	8.3	50	7.12	33.35	26.12	191	0.113
	75	9	5.65	33.37	6.67	-	8.2	75	5.65	33.37	26.32	172	0.159
	98	9	5.38	33.48	6.68	1.5	8.1	100	5.30	33.48	26.46	158	0.200
	140	23	5.00	33.51	6.33	-	8.0	150	4.88	33.55	26.56	149	0.277
	187	23	4.40	33.69	5.28	1.6	8.0	200	4.20	33.73	26.76	130	0.348
	280	23	3.73	33.86	3.23	-	7.9	300	3.73	33.87	26.94	113	0.491
	375	23	3.63	-	2.05	2.9	7.7	400	3.73	33.96	27.00	107	0.603
	467	24	3.73	34.04	1.48	-	7.7	500	3.70	34.11	27.12	96	0.708
	561	24	3.53	34.22	1.14	2.9	7.7	600	3.40	34.24	27.26	82	0.801
	752	24	3.19	34.33	0.83	2.9	7.7	800	3.03	34.34	27.35	74	0.977
	942	24	2.91	34.40	0.85	3.0	7.6	1000	2.80	34.40	27.44	65	1.128
	1365	35	2.28	34.40	0.93	3.1	7.7	1500	2.15	34.52	27.60	50	1.451
	1830	35	1.96	34.60	1.44	2.6	7.8						

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm³/g	dyn. m

TENYO MARU; August 6, 1955; 1307-1443 GCT; 43°02'N, 176°00'E; 1504 x 186 xx xx xxxx 1 x x xx xx 1 1 x. 20

0		18.5	33.78				0	18.5	33.78	24.23	370	0.000
10	4	17.70	33.71				10	17.70	33.71	24.37	357	0.036
25	4	15.30	33.98				25	15.30	33.98	25.15	283	0.084
50	13	12.68	34.29				50	12.68	34.29	25.92	210	0.146
75	4	11.36	34.31				75	11.36	34.31	26.20	183	0.195
100	4	10.89	34.25				100	10.89	34.25	26.23	180	0.241
145	13	10.11	34.22				150	10.00	34.22	26.36	168	0.330
194	13	9.08	34.16				200	8.91	34.16	26.50	154	0.412
290	13	7.38	34.02				300	7.18	34.00	26.62	143	0.564
388	13	5.68	33.93				400	5.50	33.91	26.78	128	0.704
467	24	4.41	33.87				500	4.33	33.93	26.92	115	0.830
562	24	4.07	34.04				600	3.98	33.89	27.07	100	0.942
752	24	3.58	34.22				800	3.50	34.09	27.25	83	1.136
942	24	3.30	34.34				1000	3.20	34.38	27.40	69	1.301
1418	25	2.48	34.58				1500	2.19	34.58	27.65	45	1.624
1875	14	2.11	34.58									

TENYO MARU; August 7, 1955; 0155-0215 GCT; 43°00'N, 178°00'E; 1504 x 191 xx xx xxxx 1 12 5 xx xx 1 1. 21

0		18.2	33.49				0	18.2	33.49	24.09	384	0.000
10	7	16.14	33.51				10	16.14	33.51	24.59	336	0.036
25	7	12.36	33.86				25	12.36	33.86	25.64	236	0.079
50	7	8.85	33.69				50	8.85	33.69	26.15	188	0.132
75	7	8.18	33.71				75	8.18	33.71	26.25	178	0.178
99	7	8.43	33.93				100	8.42	33.93	26.39	165	0.221
140	24	7.04	33.84				150	7.02	33.84	26.52	153	0.302
185	24	6.93	33.86				200	6.81	33.86	26.57	148	0.378
278	24	5.37	33.86				300	5.12	33.86	26.78	128	0.519
372	24	4.62	33.91				400	4.52	33.95	26.91	116	0.644
457	29	4.41	34.04				500	4.36	34.05	27.01	106	0.759
550	29	4.03	34.09				600	3.90	34.09	27.12	96	0.865
738	29	3.60	34.22				800	3.50	34.29	27.29	80	1.051
925	29	3.18	34.36				1000	3.04	34.42	27.44	64	1.208
1365	35	2.40	34.52				1500	2.32	34.54	27.60	50	1.531
1830	35	2.04	34.60									

TENYO MARU; August 7, 1955; 1120-1425 GCT; 43°00'N, 180°00'E; 1301 x 178 xx xx xxxx x 16 x xx xx 1 1. 22

0		19.4	33.71	5.85	0.7	8.3	0	19.4	33.71	23.96	396	0.000
10	2	17.13	33.95	6.08	-	8.3	10	17.13	33.95	24.70	326	0.036
25	2	13.56	34.18	6.57	-	8.3	25	13.56	34.18	25.66	234	0.078
50	2	11.16	34.20	6.21	0.7	8.3	50	11.16	34.20	26.15	188	0.131
75	2	10.49	34.22	5.83	-	8.2	75	10.49	34.22	26.28	175	0.177
98	7	9.99	34.22	5.75	1.0	8.1	100	9.98	34.22	26.35	169	0.221
197	7	9.41	34.16	5.56	1.7	8.0	150	9.67	34.18	26.39	165	0.305
296	7	7.77	34.04	5.38	-	8.0	200	9.40	34.16	26.42	162	0.389
395	7	6.17	33.95	4.73	1.7	8.0	300	7.75	34.04	26.56	149	0.548
499	3	4.43	34.00	2.57	-	7.7	400	6.10	33.95	26.73	133	0.694
598	3	4.30	34.09	1.89	1.8	7.7	500	4.41	34.00	26.96	111	0.821
797	3	3.65	34.22	0.94	2.3	7.7	600	4.28	34.09	27.05	102	0.932
996	3	3.20	34.47	0.89	2.6	7.6	800	3.61	34.24	27.24	84	1.130
1496	3	2.40	34.54	0.84	2.3	7.7	1000	3.05	34.49	27.49	60	1.288
1993	3	1.98	34.58	1.33	2.5	7.7	1500	2.39	34.54	27.59	51	1.603
							2000	(1.97)	(34.58)	(27.62)	(48)	(1.898)

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn.m

23 TENYO MARU; August 8, 1955; 1212-1320 GCT; 43°57'N, 177°30'E; calm x 170 xx xx xxxx 1 x x xx xx 1 1 x.

0		17.1	33.35				0	17.1	33.35	24.25	368	0.000
10	0	15.16	33.35				10	15.16	33.35	24.68	327	0.035
25	0	12.84	33.62				25	12.84	33.62	25.37	262	0.079
50	0	10.29	34.04				50	10.29	34.04	26.17	186	0.135
75	0	8.89	34.04				75	8.89	34.04	26.41	163	0.179
100	0	7.93	34.04				100	7.93	34.04	26.55	150	0.219
150	0	6.81	33.87				150	6.81	33.87	25.58	147	0.294
200	3	5.78	33.82				200	5.78	33.82	26.67	138	0.367
299	3	4.93	33.95				300	4.93	33.95	26.86	120	0.500
398	3	4.19	33.98				400	4.19	33.98	26.97	110	0.618
491	3	4.10	34.04				500	4.10	34.04	27.02	105	0.729
590	9	3.98	34.16				600	3.90	34.16	27.15	93	0.832
787	9	3.43	34.29				800	3.40	34.29	27.30	79	1.015
985	9	2.99	34.40				1000	2.90	34.40	27.43	66	1.172
1477	9	2.35	34.56				1500	2.31	34.56	27.62	48	1.494
1972	9	2.04	34.58				2000	(2.04)	(34.58)	(27.65)	(45)	(1.770)

24 TENYO MARU; August 9, 1955; 0133-0329 GCT; 44°53'N, 175°00'E; 1504 x 172 xx xx xxxx 1 14 4 xx xx 1 1 x.

0		15.4	33.15	6.44	0.8	8.3	0	15.4	33.15	24.48	347	0.000
10	0	13.92	33.17	6.17	-	8.3	10	13.92	33.17	24.80	316	0.033
25	0	10.36	33.33	6.54	-	8.3	25	10.36	33.33	25.61	239	0.075
50	0	7.22	33.48	6.59	1.1	8.3	50	7.22	33.48	26.21	182	0.128
75	0	6.13	33.53	6.67	-	8.2	75	6.13	33.53	26.41	163	0.171
100	0	5.79	33.51	6.58	-	8.2	100	5.79	33.51	26.43	161	0.212
150	0	6.05	33.69	6.18	-	8.1	150	6.05	33.69	26.58	147	0.290
200	0	5.49	33.73	6.48	1.2	8.1	200	5.49	33.73	26.67	138	0.361
300	0	4.20	33.86	3.85	-	7.9	300	4.20	33.86	26.86	120	0.494
400	0	3.65	33.93	2.57	2.2	7.7	400	3.65	33.93	26.97	110	0.612
500	0	4.10	34.04	1.74	-	7.7	500	4.10	34.04	27.01	106	0.723
600	0	3.63	34.22	1.21	-	7.7	600	3.63	34.22	27.21	87	0.824
800	0	3.33	34.31	1.01	1.8	7.7	800	3.33	34.31	27.30	79	1.001
1000	0	3.01	34.40	0.77	1.8	7.7	1000	3.01	34.40	27.43	66	1.157
1500	0	2.27	34.58	0.97	-	7.6	1500	2.27	34.58	27.62	48	1.478
2000	0	2.00	34.58	1.45	2.5	7.7	2000	2.00	34.58	27.65	45	1.755

25 TENYO MARU; August 9, 1955; 1615-1711 GCT; 45°58'N, 172°34'E; 0501 x 158 xx xx xxxx 1 x x xx xx 1 1.

0		13.1	32.97				0	13.1	32.97	24.82	314	0.000
10	5	9.41	33.10				10	9.41	33.10	25.58	242	0.028
25	5	6.54	33.15				25	6.54	33.15	26.05	197	0.061
50	5	3.67	33.33				50	3.67	33.33	26.51	154	0.105
75	5	2.41	33.33				75	2.41	33.33	26.62	143	0.142
98	6	2.54	33.42				100	2.53	33.42	26.69	136	0.177
148	6	2.45	33.53				150	2.47	33.53	26.78	128	0.244
197	6	2.98	33.82				200	2.99	33.82	26.96	110	0.304
296	6	3.10	33.96				300	3.11	33.96	27.07	100	0.411
395	6	3.12	34.07				400	3.13	34.07	27.15	93	0.509
500	0	3.28	34.22				500	3.28	34.22	27.25	83	0.600
600	0	3.28	34.25				600	3.28	34.25	27.28	80	0.685
800	0	2.87	34.38				800	2.67	34.38	27.44	65	0.839
1000	0	2.67	34.40				1000	2.67	34.40	27.45	64	0.978
1467	14	2.11	34.58				1500	2.05	34.58	27.66	45	1.280
1958	14	1.88	34.61				2000	(1.86)	(34.61)	(27.71)	(40)	(1.531)

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

TENYO MARU; August 10, 1955; 0647-0837 GCT; 46°40'N, 170°00'E; 0704 x 146 xx xx xxxx 1 15 x xx xx 1 1. 26

0		12.9	33.03	6.51	1.3	8.3	0	12.9	33.03	24.90	307	0.000
10	5	11.38	33.04	6.65	-	8.3	10	11.38	33.04	25.20	278	0.029
25	5	7.74	33.06	7.41	-	8.2	25	7.74	33.06	25.81	220	0.067
50	5	3.43	33.21	7.33	1.6	8.2	50	3.43	33.21	26.43	161	0.115
75	5	2.29	33.26	7.37	-	8.1	75	2.29	33.26	26.58	147	0.153
100	5	2.09	33.26	7.23	1.8	8.1	100	2.09	33.26	26.60	145	0.190
147	7	2.29	33.51	5.54	-	8.1	150	2.31	33.51	26.76	130	0.259
197	7	2.58	33.73	3.13	2.5	7.8	200	2.61	33.73	26.92	115	0.321
295	7	3.08	33.96	1.36	-	7.7	300	3.10	33.96	27.08	99	0.429
394	7	3.17	34.09	0.97	2.3	7.7	400	3.18	34.09	27.16	92	0.527
488	11	3.30	34.20	0.82	-	-	500	3.28	34.20	27.24	84	0.617
587	11	3.10	34.25	0.67	2.6	7.7	600	3.10	34.27	27.32	77	0.699
784	11	2.87	34.40	0.86	2.8	7.7	800	2.86	34.40	27.43	66	0.851
981	11	2.65	34.42	0.88	2.8	7.7	1000	2.61	34.43	27.49	61	0.989
1450	18	2.13	34.58	1.10	2.1	7.8	1500	2.12	34.58	27.65	45	1.286
1940	18	1.95	34.60	1.85	2.5	7.8	2000	(1.93)	(34.60)	(27.69)	(42)	(1.542)

TENYO MARU; August 10, 1955; 2040-2210 GCT; 47°29'N, 167°35'E; 0904 x 137 xx xx xxxx 1 15 5 xx xx 1 1 x. 27

0		12.2	33.03				0	12.2	33.03	25.02	295	0.000
10	4	10.59	33.10				10	10.59	33.10	25.40	259	0.028
25	4	5.98	33.22				25	5.98	33.22	26.18	184	0.061
50	4	3.09	33.33				50	3.09	33.33	26.57	148	0.102
75	4	2.16	33.33				75	2.16	33.33	26.64	141	0.139
100	4	2.37	33.33				100	2.37	33.33	26.62	143	0.174
143	18	2.01	33.48				150	2.10	33.46	26.76	130	0.243
190	18	2.73	33.82				200	2.80	33.86	27.01	106	0.302
286	18	3.19	34.00				300	3.18	34.00	27.09	98	0.406
382	18	3.44	34.04				400	3.43	34.02	27.10	98	0.506
475	20	3.37	34.22				500	3.28	34.22	27.25	83	0.600
575	18	3.25	34.22				600	3.24	34.25	27.29	80	0.685
768	18	2.92	34.40				800	2.90	34.41	27.45	64	0.838
1414	26	2.10	34.58				1000	2.60	34.45	27.51	59	0.974
1892	26	1.90	34.58				1500	1.98	34.58	27.66	45	1.268

TENYO MARU; August 11, 1955; 1500-1730 GCT; 48°20'N, 165°03'E; 1107 x 137 xx xx xxxx 1 x x xx xx 1 1 x. 28

0		12.0	32.94	6.69	1.2	8.3	0	12.0	32.94	25.00	297	0.000
10	5	9.41	33.01	7.16	-	8.2	10	9.41	33.01	25.52	248	0.027
25	5	7.06	33.06	7.29	-	8.2	25	7.06	33.06	25.90	211	0.062
50	5	3.32	33.22	7.43	1.4	8.1	50	3.32	33.22	26.46	158	0.108
75	5	2.19	33.22	7.26	-	8.1	75	2.19	33.22	26.55	150	0.147
99	5	2.07	33.21	7.52	1.7	8.0	100	2.08	33.21	26.56	149	0.184
143	16	2.23	33.39	6.65	-	7.9	150	2.27	33.39	26.68	137	0.256
192	16	2.30	33.62	3.83	1.6	7.8	200	2.25	33.64	26.91	116	0.317
288	16	3.05	33.84	2.40	-	7.7	300	3.10	33.86	26.99	108	0.430
385	16	3.13	33.98	1.19	2.5	7.7	400	3.15	33.98	27.10	98	0.535
475	20	3.28	34.13	1.13	-	7.7	500	3.28	34.13	27.19	89	0.630
570	20	3.22	34.16	0.64	2.6	7.7	600	3.12	34.18	27.24	84	0.720
764	20	2.89	34.31	0.54	2.6	7.7	800	2.95	34.33	27.36	73	0.887
967	20	2.74	34.34	0.67	2.1	7.8	1000	2.61	34.40	27.45	64	1.035
1400	29	2.19	34.51	0.97	2.5	7.6	1500	1.98	34.52	27.62	48	1.348
1875	29	1.95	34.56	1.59	2.2	7.7						

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TENYO MARU; August 12, 1955; 0415-0512 GCT; 49°07'N, 162°30'E; xx x 154 xx xx xxxx 1 14 4-5 xx xx 1 1 x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ‰	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		12.6	32.95				0	12.6	32.95	24.90	307	0.000
10	8	9.69	33.01				10	9.69	33.01	25.48	251	0.028
25	8	9.06	33.04				25	9.06	33.04	25.59	141	0.065
50	8	3.54	33.17				50	3.54	33.17	26.40	164	0.116
75	8	2.32	33.17				75	2.32	33.17	26.51	154	0.155
98	8	1.88	33.21				100	1.87	33.21	26.56	149	0.193
144	15	1.19	33.24				150	1.20	33.24	26.65	140	0.266
192	15	1.94	33.48				200	2.10	33.50	26.78	128	0.333
289	15	2.85	33.87				300	2.90	33.87	27.01	106	0.451
385	15	3.15	34.02				400	3.17	34.05	27.12	96	0.554
473	21	3.27	34.13				500	3.25	34.15	27.20	88	0.649
568	21	3.16	34.20				600	3.01	34.22	27.28	80	0.737
760	21	2.83	34.31				800	2.78	34.33	27.39	70	0.892
954	21	2.68	34.38				1000	2.58	34.40	27.45	64	1.037
1410	27	2.24	34.52				1500	2.20	34.52	27.60	50	1.356
1890	27	2.05	34.56									

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TENYO MARU; August 18, 1955; 0220-0340 GCT; 47°19'N, 159°48'E; 2517 x 141 xx xx xxxx 1 10 5 xx xx 1 x x.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ‰	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		11.1	32.90	6.45	1.0		0	11.1	32.90	25.14	284	0.000
10	28	10.79	32.90	6.54	-		10	10.79	32.90	25.19	279	0.028
25	5	10.72	32.90	6.49	-		25	10.72	32.90	25.21	278	0.070
50	5	2.28	33.15	7.84	1.6		50	2.28	33.15	26.50	154	0.124
75	5	1.06	33.19	7.18	-		75	1.06	33.19	26.61	144	0.161
99	5	0.92	33.21	7.18	2.0		100	0.92	33.21	26.63	142	0.197
146	10	0.92	33.28	6.60	-		150	1.02	33.30	26.70	135	0.267
195	10	2.54	33.64	3.13	2.5		200	2.60	33.66	26.87	119	0.335
293	10	3.27	33.96	0.63	-		300	3.24	33.96	27.05	102	0.448
392	10	3.19	34.15	0.66	2.7		400	3.17	34.15	27.21	87	0.545
473	21	3.12	34.22	0.62	-		500	3.10	34.24	27.28	80	0.631
568	21	3.05	34.27	0.55	2.4		600	3.00	34.29	27.34	75	0.713
760	21	2.74	34.36	0.65	2.5		800	2.71	34.38	27.43	66	0.862
955	21	2.63	34.42	0.65	2.3		1000	2.60	34.43	27.49	61	1.000
1407	28	2.15	34.52	1.04	2.5		1500	2.02	34.54	27.62	48	1.303
1880	28	1.86	34.58	1.73	2.1							

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TENYO MARU; August 18, 1955; 1310-1450 GCT; 46°45'N, 157°51'E; 2304 x 136 xx xx xxxx 1 x x xx xx 1 1.

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W ‰	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		10.4	32.95				0	10.4	32.95	25.31	267	0.000
10	2	10.14	32.95				10	10.14	32.95	25.35	264	0.027
25	2	8.39	33.01				25	8.39	33.01	25.67	233	0.064
50	2	3.14	33.15				50	3.14	33.15	26.42	162	0.113
75	6	2.04	33.17				75	2.04	33.17	26.53	152	0.153
98	6	1.34	33.24				100	1.32	33.24	26.64	141	0.189
146	12	1.14	33.26				150	1.22	33.31	26.70	135	0.258
194	12	2.09	33.59				200	2.61	33.62	26.84	122	0.323
292	12	3.19	34.07				300	3.19	34.07	27.15	93	0.432
390	12	3.18	34.16				400	3.16	34.18	27.24	84	0.523
495	5	2.95	34.27				500	2.92	34.27	27.31	78	0.607
590	4	2.87	-				600	2.83	34.31	27.36	73	0.685
793	5	2.76	34.40				800	2.70	34.40	27.45	64	0.831
992	5	2.39	34.45				1000	2.30	34.47	27.53	57	0.962
1492	4	1.95	34.56				1500	1.89	34.58	27.67	44	1.242
1990	4	1.73	34.63				2000	(1.72)	(34.63)	(27.74)	(39)	(1.483)

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✲°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

TENYO MARU; August 19, 1955; 0800-1030 GCT; 46°12'N, 155°56'E; 2301 x 139 xx xx xxxx 1 x x xx xx 1 1 x. 32

0		12.1	32.90	6.18	1.1	8.3	0	12.1	32.90	24.97	300	0.000
10	0	11.20	32.90	6.32	-	8.2	10	11.20	32.90	25.14	284	0.029
25	0	6.41	33.08	7.18	-	8.1	25	6.41	33.08	26.00	202	0.066
50	0	2.23	33.19	7.30	1.6	7.9	50	2.23	33.19	26.52	153	0.110
75	0	1.58	33.19	7.31	-	8.0	75	1.58	33.19	26.57	148	0.148
100	0	1.16	33.21	7.31	2.4	8.0	100	1.16	33.21	26.62	143	0.184
150	0	1.67	-	4.76	-	7.9	150	1.67	33.51	26.83	123	0.251
200	0	2.93	33.84	1.77	2.5	7.7	200	2.93	33.84	26.99	108	0.306
300	0	3.24	34.02	0.69	-	7.8	300	3.24	34.02	27.10	98	0.410
400	0	3.22	34.15	0.54	2.5	7.7	400	3.22	34.15	27.21	87	0.505
480	17	3.25	34.20	0.58	-	7.7	500	3.20	34.24	27.28	80	0.592
577	17	2.97	34.29	0.52	2.4	7.7	600	2.84	34.33	27.37	72	0.672
770	17	2.66	34.38	0.59	2.5	7.7	800	2.60	34.42	27.47	62	0.814
965	17	2.48	34.47	0.77	2.4	7.7	1000	2.33	34.49	27.56	55	0.941
1440	20	2.06	34.54	1.29	-	-	1500	2.00	34.54	27.63	47	1.227
1922	20	1.88	34.61	1.39	2.3	7.7	2000	(1.85)	(34.63)	(27.74)	(39)	(1.483)

TENYO MARU; August 20, 1955; 0610-0728 GCT; 45°28'N, 153°53'E; 2511 x 128 xx xx xxxx 1 13 x xx xx 1 1 x. 33

0		9.9	32.95				0	9.9	32.95	25.40	259	0.000
10	15	9.37	32.95				10	9.37	32.95	25.48	251	0.026
25	15	8.25	33.04				25	8.25	33.04	25.72	229	0.062
50	15	1.95	33.24				50	1.95	33.24	26.59	146	0.108
73	15	1.32	33.31				75	1.31	33.31	26.69	136	0.144
96	15	1.16	33.35				100	1.18	33.35	26.73	133	0.177
141	21	1.21	33.40				150	1.19	33.40	26.77	129	0.243
188	21	1.12	33.40				200	1.10	33.40	26.78	128	0.307
282	21	1.23	33.44				300	1.21	33.46	26.81	125	0.434
377	21	1.17	33.55				400	1.22	33.55	26.87	119	0.556
461	27	1.51	33.57				500	1.57	33.59	26.89	117	0.675
555	27	1.60	33.60				600	1.80	33.69	26.96	111	0.791
745	27	2.50	33.89				800	2.71	33.96	27.10	98	0.898
935	27	2.90	34.11				1000	2.84	34.16	27.25	83	1.089
1375	34	2.52	34.42				1500	2.32	34.45	27.53	57	1.379
1840	34	2.19	34.56									

TENYO MARU; August 20, 1955; 1720-1835 GCT; 44°38'N, 152°08'E; 2511 x 151 xx xx xxxx 1 x x xx xx 1 1 x. 34

0		13.0	32.72	5.72			0	13.0	32.72	24.66	329	0.000
10	10	12.67	32.81	6.05			10	12.67	32.81	24.78	318	0.032
25	10	6.91	32.99	6.17			25	6.91	32.99	25.87	214	0.072
50	10	1.96	33.15	6.13			50	1.96	33.15	26.52	153	0.118
74	10	1.36	33.19	6.59			75	1.35	33.19	26.59	146	0.156
98	10	1.03	33.22	7.34			100	1.02	33.22	26.64	141	0.192
135	30	0.96	33.29	6.71			150	1.04	33.33	26.72	134	0.260
180	30	1.71	33.50	4.85			200	2.02	33.59	26.86	120	0.324
271	30	2.84	33.89	1.65			300	2.85	33.95	27.08	99	0.435
363	30	2.87	34.05	1.22			400	2.98	34.05	27.15	93	0.533
464	31	3.09	34.07	1.08			500	2.95	34.16	27.24	84	0.624
545	31	2.90	34.18	1.01			600	2.90	34.22	27.29	80	0.709
732	31	2.85	34.27	0.98			800	2.80	34.34	27.40	69	0.867
920	31	2.63	34.38	0.88			1000	2.45	34.42	27.49	61	1.007
1352	38	2.28	34.52	0.58			1500	2.12	34.54	27.62	48	1.308
1810	38	2.06	34.60	1.63								

		OBSERVED						INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH		Z	T	S	σ_t	δ_T	ΔD
m	⁎°	°C	‰	ml/L	μg at/L			m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
35		TENYO MARU; August 21, 1955; 0435-0540 GCT; 43°49'N, 150°24'E; 2007 x 164 xx xx xxxx 1 x 4 xx xx 1 1 x.											
0		12.5	32.66	6.15	-	8.2		0	12.5	32.66	24.70	326	0.000
10	11	10.86	32.77	6.47	-	8.2		10	10.86	32.77	25.08	289	0.031
25	11	3.68	33.08	7.28	-	8.0		25	3.68	33.08	26.31	172	0.065
50	11	1.60	33.22	7.01	1.5	8.0		50	1.60	33.22	26.60	145	0.105
74	11	1.17	33.22	7.01	-	8.0		75	1.16	33.22	26.63	142	0.141
96	11	1.10	33.26	6.51	3.1	8.0		100	1.11	33.26	26.67	138	0.176
138	26	1.24	33.39	5.89	-	7.9		150	1.30	33.42	26.78	128	0.243
184	26	1.60	33.51	4.80	3.0	7.8		200	1.61	33.55	26.85	121	0.305
277	26	2.15	33.69	3.26	-	7.7		300	2.31	33.77	26.98	109	0.421
370	26	2.99	33.96	0.91	2.3	7.7		400	3.03	34.00	27.11	97	0.526
478	18	3.10	34.11	0.72	-	7.7		500	3.08	34.13	27.20	88	0.621
575	18	3.06	34.25	0.64	2.0	7.6		600	3.04	34.25	27.26	82	0.709
768	18	2.91	34.34	0.64	-	7.7		800	2.86	34.36	27.41	68	0.869
963	18	2.51	34.43	0.95	2.3	7.7		1000	2.42	34.43	27.52	58	1.005
1415	26	2.32	34.52	1.11	2.2	7.7		1500	2.30	34.54	27.60	50	1.308
1895	26	1.98	34.60	1.22	2.1	7.8							
36		TENYO MARU; August 22, 1955; 1105-1340 GCT; 43°05'N, 148°41'E; xx x 194 xx xx xxxx x x x xx xx 1 1.											
0		17.6	33.59					0	17.6	33.59	24.30	364	0.000
10	11	17.24	33.60					10	17.24	33.60	24.41	354	0.036
25	11	8.88	34.07					25	8.88	34.07	26.43	161	0.067
50	11	8.34	34.07					50	8.34	34.07	26.51	154	0.107
74	12	8.37	34.07					75	8.37	34.07	26.50	154	0.145
98	11	8.45	34.09					100	8.43	34.09	26.51	154	0.184
144	15	8.27	34.09					150	8.27	34.09	26.53	152	0.261
192	15	8.27	34.09					200	8.24	34.09	26.54	151	0.338
289	15	7.99	34.05					300	7.88	34.05	26.56	149	0.492
385	15	6.79	33.93					400	6.40	33.91	26.66	139	0.641
455	30	4.45	33.73					500	4.05	33.73	26.78	128	0.778
548	30	3.28	33.75					600	3.22	33.78	26.91	116	0.904
735	30	3.49	34.07					800	3.40	34.07	27.12	96	1.125
922	30	2.97	34.15					1000	2.82	34.16	27.25	83	1.315
1399	30	2.60	34.45					1500	2.50	34.45	27.51	59	1.706
1865	30	2.18	34.56										
37		TENYO MARU; August 22, 1955; 2315-0030 GCT; 42°15'N, 147°03'E; 2501 x 212 xx xx xxxx 2 17 3 xx xx 1 1 x.											
0		21.0	33.21	5.09	-	8.3		0	21.0	33.21	23.15	473	0.000
10	10	22.08	33.44	5.36	-	8.3		10	22.08	33.44	23.04	484	0.048
25	10	14.09	33.55	6.97	-	8.3		25	14.09	33.55	25.07	290	0.106
50	10	8.95	33.96	4.78	-	8.1		50	8.95	33.96	26.33	171	0.164
74	10	7.05	33.86	5.16	-	8.1		75	6.95	33.86	26.55	150	0.204
98	10	5.00	33.69	5.61	1.1	7.9		100	4.70	33.69	26.68	137	0.240
145	14	3.71	33.59	5.60	-	8.0		150	4.00	33.60	26.70	135	0.309
193	14	4.82	33.89	3.99	1.7	7.9		200	4.80	33.89	26.84	122	0.374
290	14	3.60	33.91	3.01	-	7.9		300	3.51	33.91	26.99	108	0.491
387	14	2.72	33.91	1.87	2.3	7.8		400	2.74	33.93	27.07	100	0.598
478	18	3.34	34.09	1.55	-	7.7		500	3.30	34.09	27.15	93	0.698
575	18	2.90	34.11	1.01	2.7	7.7		600	2.82	34.15	27.24	84	0.790
768	18	2.62	34.29	0.97	2.9	7.8		800	2.60	34.29	27.38	71	0.953
1429	23	2.27	34.51	1.21	2.4	7.8		1000	2.38	34.36	27.45	64	1.098
1910	23	1.98	34.58	1.81	2.2	7.8		1500	2.22	34.52	27.60	50	1.417
								2000	(1.93)	(34.60)	(27.69)	(42)	(1.687)

TENYO MARU; September 4, 1955; 0415-0530 GCT; 42°30'N, 144°20'E; 3101 x 200 xx xx xxxx 1 24 4 950-3 xx 1 1 x. 38

OBSERVED							INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	pH	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		18.3	33.01	5.43			0	18.3	33.01	23.68	423	0.000
10	13	17.39	32.97	6.72			10	17.39	32.97	23.88	405	0.041
25	13	17.02	32.92	5.69			25	17.02	32.92	23.94	398	0.102
50	13	3.49	33.22	6.78			50	3.49	33.22	26.45	159	0.171
74	13	1.93	33.30	6.71			75	1.93	33.30	26.63	142	0.209
97	13	1.86	33.39	6.60			100	1.81	33.40	26.73	133	0.243
141	21	1.15	33.40	5.66			150	1.15	33.40	26.78	128	0.309
188	21	1.12	33.42	5.39			200	1.12	33.42	26.79	127	0.372
283	21	1.09	33.44	5.18			300	1.11	33.46	26.82	124	0.499
378	21	1.18	33.57	4.57			400	1.30	33.60	26.92	116	0.620
483	15	1.76	33.71	3.84			500	1.89	33.75	27.00	107	0.733
580	15	2.55	33.91	2.16			600	2.58	33.93	27.09	98	0.838
775	15	2.83	34.20	0.97			800	2.83	34.22	27.30	79	1.025
873	15	2.85	34.25	0.88			1000	(2.85)	(34.25)	(27.32)	(77)	(1.108)

TENYO MARU; September 4, 1955; 0801-0930 GCT; 42°05'N, 144°19'E; 0204 x 196 xx xx xxxx 1 20 3 1250-3 xx 1 1 x. 39

0		19.4	32.86	5.53	0.8	8.3	0	19.4	32.86	23.31	458	0.000
10	7	18.80	32.82	5.66	-	8.3	10	18.80	32.82	23.43	447	0.045
25	7	14.71	33.22	7.14	-	8.2	25	14.71	33.22	24.68	327	0.103
50	7	3.65	33.22	7.44	1.6	7.9	50	3.65	33.22	26.43	161	0.165
74	7	3.24	33.38	6.47	-	7.9	75	3.19	33.38	26.60	145	0.203
99	7	2.04	33.33	6.81	1.9	7.7	100	2.01	33.33	26.65	140	0.239
148	7	1.27	33.38	6.47	-	7.7	150	1.29	33.38	26.75	131	0.307
197	7	1.69	33.47	5.28	2.0	7.7	200	1.70	33.47	26.79	127	0.371
395	7	2.72	33.92	2.10	2.5	7.5	300	2.20	33.71	26.95	118	0.492
465	25	2.86	33.98	1.49	-	7.5	400	2.73	33.92	27.07	100	0.600
560	25	2.96	34.11	1.09	2.5	7.5	500	2.88	33.98	27.11	98	0.701
750	25	2.72	34.28	0.90	2.6	7.5	600	2.90	34.14	27.23	85	0.796
940	25	2.57	34.34	0.90	2.7	7.5	800	2.69	34.28	27.36	72	0.961
							1000	(2.52)	(34.36)	(27.42)	(65)	(1.135)

TENYO MARU; September 4, 1955; 1145-1250 GCT; 41°41'N, 144°13'E; 0507 x 184 x xx xx xxxx 1 x x xx xx 1 1. 40

0		19.2	32.80	5.46			0	19.2	32.80	23.33	456	0.000
10	13	18.76	32.77	5.60			10	18.76	32.77	23.40	450	0.045
23	13	18.26	32.86	5.74			25	18.26	32.86	23.58	432	0.112
50	13	5.68	33.08	7.87			50	5.68	33.08	26.11	191	0.190
73	13	2.34	33.18	7.36			75	2.41	33.18	26.52	153	0.233
96	13	3.14	33.37	6.47			100	2.95	33.38	26.63	142	0.270
140	23	1.05	33.31	6.73			150	1.14	33.35	26.73	133	0.339
186	23	1.46	33.44	5.79			200	1.48	33.49	26.83	123	0.403
280	23	2.24	33.77	2.96			300	2.28	33.78	27.00	107	0.522
453	31	2.57	33.89	2.12			400	2.46	33.86	27.04	103	0.666
545	31	3.02	34.09	1.16			500	2.80	34.00	27.14	94	0.724
732	31	2.90	34.27	0.92			600	2.98	34.14	27.23	85	0.817
919	37	2.73	34.38	1.05			800	2.84	34.30	27.37	72	0.983
1360	37	2.27	34.51	1.08			1000	2.65	34.39	27.45	64	1.129

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TENYO MARU; September 4, 1955; 1810-1943 GCT; 40°53'N, 144°00'E; 0504 x 192 xx xx xxxx x x x xx 28-10 1 1 x.

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	↺°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		21.0	33.47	5.29			0	21.0	33.47	23.35	454	0.000
10	5	20.87	33.42	5.48			10	20.87	33.42	23.35	454	0.045
25	5	10.82	33.42	-			25	10.82	33.42	25.60	240	0.098
50	5	7.54	33.71	5.99			50	7.54	33.71	26.34	170	0.149
74	5	6.37	33.76	5.37			75	6.32	33.76	26.56	149	0.189
98	5	5.25	33.76	5.37			100	5.18	33.76	26.70	135	0.225
149	4	3.47	33.63	5.40			150	3.47	33.63	26.77	129	0.291
198	4	3.52	33.74	4.59			200	3.52	33.74	26.85	121	0.355
297	4	3.71	33.92	3.09			300	3.72	33.92	26.97	110	0.473
390	12	3.87	34.07	2.04			400	3.84	34.09	27.10	98	0.597
591	8	3.73	34.27	1.33			500	3.80	34.18	27.18	90	0.695
789	8	3.09	34.37	1.09			600	3.70	34.27	27.26	82	0.786
987	8	2.81	34.45	1.03			800	3.08	34.37	27.40	69	0.948
1477	10	2.26	34.57	1.43			1000	2.80	34.45	27.48	62	1.090
1974	10	1.84	34.63	-			1500	2.24	34.57	27.64	46	1.390
							2000	(1.83)	(34.63)	(27.71)	(40)	(1.641)

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TENYO MARU; September 5, 1955; 0040-0300 GCT; 40°00'N, 144°06'E; 0501 x 208 xx xx xxxx 1 20 4 xx xx 1 1 x.

0		19.7	33.29	5.47	0.8	8.2	0	19.7	33.29	23.56	434	0.000
10	3	19.23	33.38	5.76	-	8.2	10	19.23	33.38	23.74	417	0.043
25	3	7.48	33.13	7.84	-	8.1	25	7.48	33.13	25.90	211	0.090
50	3	4.65	33.18	7.63	1.2	7.9	50	4.65	33.18	26.30	173	0.138
75	3	3.99	33.24	6.80	-	7.8	75	3.99	33.24	26.42	162	0.180
100	3	2.08	33.27	6.78	1.8	7.8	100	2.08	33.27	26.61	144	0.218
150	0	2.06	33.42	6.50	-	7.7	150	2.06	33.42	26.73	133	0.288
200	0	1.66	33.51	5.18	2.1	7.8	200	1.66	33.51	26.83	123	0.352
300	0	2.30	33.76	3.22	-	7.7	300	2.30	33.76	26.98	109	0.469
400	0	2.57	33.92	2.04	2.5	7.5	400	2.57	33.92	27.09	98	0.574
500	0	2.96	34.09	1.31	-	7.5	500	2.96	34.09	27.18	90	0.670
600	0	2.94	34.18	1.00	2.6	7.6	600	2.94	34.18	27.25	83	0.760
800	0	2.68	34.32	0.91	2.5	7.6	800	2.68	34.32	27.40	69	0.921
1000	0	2.67	34.41	0.97	2.5	7.6	1000	2.67	34.41	27.46	63	1.064
1485	7	2.25	34.52	1.35	2.5	7.5	1500	2.25	34.52	27.60	50	1.377
1980	7	1.85	34.63	-	2.5	7.6	2000	(1.83)	(34.63)	(27.72)	(39)	(1.629)

43

TENYO MARU; September 5, 1955; 0848-0948 GCT; 39°09'N, 144°16'E; 1304 x 232 xx xx xxxx x x x xx xx 1 1 x.

0		24.7	33.60	4.91	0.1	8.2	0	24.7	33.60	22.40	545	0.000
10	4	24.23	33.56	4.99	-	8.3	10	24.23	33.56	22.52	534	0.054
25	4	17.19	33.36	7.10	-	8.3	25	17.19	33.36	24.23	370	0.122
50	4	11.36	34.00	5.55	0.6	8.1	50	11.36	34.00	25.95	207	0.194
75	4	10.59	34.25	4.14	-	7.9	75	10.59	34.25	26.30	173	0.242
99	4	9.60	34.23	4.14	1.0	7.9	100	9.54	34.23	26.45	159	0.284
148	3	6.92	34.12	3.22	-	7.7	150	6.90	34.12	26.77	129	0.357
197	3	5.77	34.18	2.44	1.7	7.7	200	5.74	34.18	26.96	111	0.418
296	3	4.95	34.27	2.18	-	7.7	300	4.92	34.27	27.12	96	0.525
395	3	4.15	-	-	1.8	7.7	400	4.15	34.27	27.20	88	0.620
500	0	3.65	34.27	1.23	-	7.6	500	3.65	34.27	27.26	82	0.708
600	0	3.50	34.34	1.30	2.0	7.6	600	3.50	34.34	27.33	76	0.792
800	0	2.88	34.37	1.10	2.2	7.6	800	2.88	34.37	27.42	67	0.944
1000	0	2.55	34.45	1.04	2.0	7.5	1000	2.55	34.45	27.51	59	1.089
1500	1	2.15	34.52	1.59	2.0	7.5	1500	2.14	34.52	27.60	50	1.386
2000	1	1.78	34.63	-	2.2	7.7	2000	1.78	34.63	27.72	39	1.645

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	≠°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
TENYO MARU; September 5, 1955; 1455-1700 GCT; 38°20'N, 144°18'E; 1304 x 226 xx xx xxxx x x												44
x xx xx 1 1.												
0		22.7	33.53	5.28	0.5	8.2	0	22.7	33.53	22.95	493	0.000
10	5	22.55	33.51	5.17	-	8.3	10	22.55	33.51	22.95	493	0.049
25	5	14.40	33.62	7.04	-	8.1	25	14.40	33.62	25.05	292	0.108
50	5	10.44	33.87	6.21	0.6	7.9	50	10.44	33.87	26.02	200	0.170
74	5	9.35	33.87	5.28	-	7.9	75	9.30	33.87	26.22	181	0.218
98	5	8.09	33.98	-	1.1	-	100	7.94	33.98	26.50	154	0.260
139	24	4.99	33.84	4.46	-	7.7	150	4.98	33.86	26.80	126	0.331
261	30	4.88	33.98	2.48	-	7.6	200	4.93	33.91	26.83	123	0.394
373	24	4.28	34.24	1.67	2.0	7.6	300	4.86	34.05	26.96	111	0.513
455	30	4.07	34.31	1.58	-	7.6	400	4.21	34.23	27.17	91	0.618
548	30	2.97	34.27	1.08	2.3	7.6	500	3.57	34.30	27.30	79	0.706
735	30	2.89	34.40	1.00	2.4	7.6	600	2.95	34.30	27.36	73	0.786
922	30	2.60	34.47	1.00	2.6	7.7	800	2.79	34.43	27.47	62	0.930
1365	35	2.16	34.54	1.50	2.3	7.7	1000	2.53	34.48	27.52	58	1.061
1830	35	1.81	34.63	-	2.3	7.7	1500	2.06	34.56	27.64	46	1.353
TENYO MARU; September 5, 1955; 2327-0100 GCT; 37°26'N, 144°25'E; 1317 x 254 xx xx xxxx 1												45
19 3 xx xx 1 1 x.												
0		26.5	34.36	4.55			0	26.5	34.36	22.42	544	0.000
10	20	26.34	34.37	4.65			10	26.34	34.37	22.48	537	0.054
25	20	26.29	34.27	4.64			25	26.29	34.27	22.44	543	0.135
49	20	24.55	34.57	4.91			50	24.40	34.57	23.22	467	0.262
72	20	21.15	34.70	5.04			75	20.99	34.70	24.30	364	0.366
94	20	19.96	34.77	4.50			100	19.74	34.77	24.67	328	0.453
131	36	18.59	34.77	4.43			150	18.08	34.75	26.08	289	0.610
175	36	17.43	34.72	4.40			200	16.51	34.70	25.52	257	0.749
264	36	14.11	34.65	4.47			300	13.71	34.57	25.94	208	0.988
353	36	13.13	34.45	3.96			400	10.93	34.34	26.30	173	1.187
410	47	10.46	34.33	3.37			500	7.86	34.05	26.57	148	1.356
497	47	7.99	34.18	3.27			600	5.79	34.00	26.82	124	1.499
670	47	4.33	33.96	2.59			800	4.28	34.19	27.12	96	1.734
840	47	4.03	34.27	1.50			1000	3.79	34.31	27.28	80	1.926
1364	57	2.61	34.45	0.93			1500	2.46	34.49	27.55	55	2.306
1850	57	2.20	34.58	-								
TENYO MARU; September 6, 1955; 0750-0900 GCT; 36°39'N, 144°26'E; 1304 x 250 xx xx xxxx x 21												46
2 xx xx 1 1 x.												
0		27.1	34.41	5.10			0	27.1	34.41	22.27	558	0.000
10	2	26.88	34.39	4.93			10	26.88	34.39	22.34	551	0.055
25	4	26.81	34.39	4.78			25	26.81	34.39	22.36	548	0.138
50	4	23.13	34.65	4.78			50	23.13	34.65	23.64	427	0.260
74	4	21.42	34.77	4.38			75	21.41	34.77	24.23	370	0.360
99	4	20.14	34.79	4.16			100	19.80	34.79	24.68	327	0.448
149	2	18.43	34.77	4.60			150	18.23	34.77	25.05	292	0.605
199	2	17.44	34.74	4.23			200	17.43	34.74	25.21	277	0.750
298	2	16.48	34.66	4.70			300	16.46	34.66	25.40	259	1.025
398	2	15.18	34.63	4.41			400	15.14	34.63	25.67	233	1.282
489	11	13.12	34.47	4.16			500	13.09	34.46	26.02	200	1.510
587	11	10.45	34.31	3.74			600	10.10	34.28	26.41	163	1.709
783	11	5.24	34.05	3.10			800	5.14	34.07	26.95	112	2.004
982	11	4.05	34.20	1.64			1000	4.03	34.19	27.16	92	2.226
1473	12	2.80	34.45	0.99			1500	2.76	34.45	27.51	59	2.897
1966	12	2.22	34.58	-			2000	(2.17)	(34.58)	(27.64)	(46)	(3.207)

TRFRL

NORPAC

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✲°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^5 cm^3/g	dyn. m
47	TENYO MARU; September 6, 1955; 1445-1615 GCT; 35°50'N, 144°16'E; 1811 x 266 xx xx xxxx x x x xx xx 1 1.											
0		27.3	34.01	4.51			0	27.3	34.01	21.91	592	0.000
10	14	27.17	34.12	4.58			10	27.17	34.12	22.04	580	0.059
25	14	27.10	34.32	4.77			25	27.10	34.32	22.20	564	0.144
50	14	25.68	34.48	5.04			50	25.68	34.48	22.78	512	0.279
73	14	21.87	34.70	5.08			75	21.70	34.70	24.10	383	0.392
96	14	20.29	34.79	4.87			100	20.11	34.79	24.60	335	0.482
137	27	18.44	34.75	4.68			150	18.14	34.75	25.07	290	0.640
173	27	17.60	34.70	4.59			200	17.48	34.70	25.20	278	0.785
280	23	16.77	34.70	5.00			300	16.45	34.68	25.43	256	1.060
368	27	15.34	34.65	4.46			400	14.49	34.54	25.70	230	1.313
417	45	14.04	34.49	4.24			500	12.22	34.48	26.17	186	1.533
502	45	12.17	34.49	3.88			600	9.17	34.27	26.54	151	1.713
676	45	6.97	34.11	3.60			800	5.46	34.14	26.98	109	1.993
850	45	4.67	34.16	1.99			1000	4.64	34.19	27.07	100	2.222
1310	43	3.16	34.36	1.02			1500	3.11	34.41	27.38	71	2.701
1755	43	1.95	34.49	-								
48	TENYO MARU; September 6-7, 1955; 2325-0045 GCT; 35°00'N, 144°20'E; 2217 x 268 xx xx xxxx 1 16 x xx xx 1 x x.											
0		27.3	34.43	4.60	0.4	8.2	0	27.3	34.43	22.22	562	0.000
10	28	27.05	34.37	4.70	-	8.3	10	27.05	34.37	22.26	559	0.056
25	28	27.04	34.41	4.60	-	8.2	25	27.04	34.41	22.29	556	0.140
50	28	26.10	34.52	4.76	0.4	8.2	50	25.79	34.54	22.78	509	0.273
70	28	22.67	34.66	4.87	-	8.2	75	22.18	34.66	23.94	398	0.387
91	28	20.60	34.70	4.94	-	8.1	100	20.37	34.70	24.45	349	0.481
121	47	19.84	34.74	4.79	-	8.1	150	19.02	34.74	24.83	313	0.649
162	47	18.68	34.76	4.66	0.2	8.1	200	18.01	34.74	25.09	288	0.802
244	47	17.24	34.70	4.74	-	8.0	300	16.81	34.70	25.35	264	1.086
327	47	16.61	34.70	4.89	-	8.1	400	16.24	34.66	25.46	253	1.355
380	58	16.52	34.69	4.98	-	8.1	500	14.68	34.57	25.73	228	1.608
460	59	15.40	34.61	4.39	0.6	8.1	600	13.57	34.39	25.83	218	1.843
625	58	12.28	34.42	3.88	0.5	7.9	800	7.68	34.12	26.65	140	2.227
760	58	8.07	34.13	3.82	1.3	7.9	1000	5.72	34.19	26.98	109	2.501
1236	68	2.66	34.31	1.75	1.8	7.6	1500	2.69	34.36	27.46	63	2.985
1700	68	2.72	34.43	-	1.8	7.6						
49	TENYO MARU; September 7, 1955; 0840-0940 GCT; 35°00'N, 143°19'E; 2504 x 266 xx xx xxxx x x x xx xx 1 1 x.											
0		27.2	34.16				0	27.2	34.16	22.05	579	0.000
10	4	26.91	34.18				10	26.91	34.18	22.16	568	0.057
25	4	26.80	34.18				25	26.80	34.18	22.19	565	0.142
50	4	22.89	34.48				50	22.89	34.48	23.60	431	0.267
75	4	21.13	34.70				75	21.13	34.70	24.25	368	0.368
98	7	19.90	34.74				100	19.83	34.74	24.63	332	0.456
148	7	18.16	34.74				150	18.12	34.74	25.06	291	0.614
197	7	17.25	34.69				200	16.22	34.69	25.23	275	0.758
296	7	16.25	34.63				300	16.18	34.63	25.45	254	1.034
395	7	14.38	34.52				400	14.27	34.52	25.78	223	1.280
477	19	12.50	34.40				500	12.03	34.37	26.13	190	1.497
572	19	10.64	34.30				600	9.52	34.28	26.50	154	1.681
766	19	6.56	34.22				800	6.20	34.23	26.94	113	1.972
960	19	4.53	34.30				1000	4.52	34.30	27.19	89	2.195
1416	25	2.73	34.43				1500	2.64	34.45	27.47	62	2.611
1895	25	2.19	34.52									

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✠°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
TENYO MARU; September 7, 1955; 1625-1745 GCT; 34°55'N, 142°18'E; 0504 x 272 xx xx xxxx x x x xx xx 1 1 x.												50
0		27.8	34.23	4.66			0	27.8	34.23	21.91	592	0.000
10	12	27.84	34.19	4.57			10	27.84	34.19	21.86	597	0.059
25	12	27.87	34.14	4.59			25	27.87	34.14	21.83	600	0.149
50	12	24.60	34.41	-			50	24.60	34.41	23.03	485	0.285
75	12	22.85	34.77	4.39			75	22.85	34.77	23.82	410	0.397
97	12	21.13	34.79	4.22			100	20.99	34.79	24.36	358	0.494
143	17	19.00	34.79	4.59			150	18.98	34.77	24.88	308	0.663
191	17	17.62	34.70	4.58			200	17.47	34.70	25.19	279	0.812
287	17	15.96	34.63	4.50			300	15.52	34.63	25.60	240	1.079
379	20	12.86	34.63	4.13			400	12.49	34.56	26.17	186	1.301
475	20	11.17	34.31	-			500	10.88	34.27	26.25	178	1.493
570	20	10.07	34.16	3.87			600	9.45	34.19	26.44	160	1.674
760	20	6.09	34.34	2.03			800	5.77	34.34	27.08	99	1.915
987	20	4.12	34.31	1.50			1000	4.00	34.32	27.27	81	2.114
1460	24	2.52	34.49	1.30			1500	2.48	34.48	27.54	56	2.501
1925	24	2.07	34.58	-			2000	(2.00)	(34.60)	(27.68)	(43)	(2.804)
TENYO MARU; September 7-8, 1955; 2355-0150 GCT; 34°00'N, 141°17'E; 0611 x 264 xx xx xxxx x 28 2 xx xx 1 1.												51
0		27.9	34.30				0	27.9	34.30	21.83	590	0.000
10	12	28.08	34.27				10	28.08	34.27	21.88	599	0.059
25	12	28.01	34.25				25	28.01	34.25	21.84	599	0.149
50	12	26.96	34.48				50	26.96	34.48	22.37	548	0.293
75	12	24.13	34.68				75	23.84	34.68	23.47	443	0.418
97	12	20.60	34.79				100	20.47	34.79	24.50	345	0.517
143	17	18.62	34.72				150	18.30	34.70	24.99	298	0.679
191	17	16.41	34.65				200	16.10	34.63	25.47	252	0.820
287	17	13.15	34.45				300	12.75	34.43	26.02	200	1.053
384	16	10.57	34.33				400	10.14	34.30	26.40	164	1.243
482	16	7.84	34.25				500	7.55	34.25	26.78	128	1.397
578	16	6.27	34.20				600	6.03	34.19	26.93	114	1.525
773	16	4.09	34.16				800	4.00	34.18	27.15	93	1.756
966	17	3.44	34.31				1000	3.38	34.32	27.32	77	1.943
1473	12	2.53	34.49				1500	(2.48)	(34.49)	(27.53)	(57)	(2.309)
TENYO MARU; September 8, 1955; 0800-0916 Gct; 34°59'N, 140°20'E; 0507 x 276 xx xx xxxx x x x 430-3 xx x x x.												52
0		27.1	34.27	4.57	0.7	8.1	0	27.1	34.27	22.16	568	0.000
10	14	25.94	34.07	4.37	-	8.2	10	25.94	34.07	22.37	548	0.056
25	14	26.51	33.87	5.03	-	8.2	25	26.51	33.87	22.05	579	0.140
50	14	20.36	34.32	4.45	1.0	8.2	50	20.29	34.32	24.19	374	0.260
73	14	18.81	34.50	4.16	-	8.2	75	18.63	34.50	24.75	321	0.347
97	14	16.60	34.52	4.04	-	8.1	100	(16.32)	(34.52)	(25.33)	(266)	(0.406)

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TENYO MARU; September 8, 1955; 1145-1216 GCT; 34°54'N, 140°03'E; xx x 264 xx xx xxxx x x x 450-3 xx 1 1 x.

OBSERVED							INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	pH	Z	T	S	σ_t	δ_T	ΔD
m	✕°	°C	‰	ml/L	μg at/L		m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m
0		26.2	34.25				0	26.2	34.25	22.43	542	0.000
10	3	25.65	34.21				10	25.65	34.21	22.57	528	0.054
25	3	25.01	34.18				25	25.01	34.18	22.74	513	0.132
50	3	22.78	34.61				50	22.78	34.61	23.72	419	0.249
74	3	20.42	34.59				75	(20.32)	(34.59)	(24.39)	(355)	(0.346)

OBSERVATIONS OF THE TOKYO UNIVERSITY OF FISHERIES

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ∢°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHINYO MARU; August 12, 1955; 0813-1138 GCT; 34°51'N, 140°00'E; 0907 03 277 0922 xxx02 1 20-x 2 over 1000-3 x-x 2 x. 1

0		26.4	34.05	4.69	0.00	0	26.4	34.05	22.22	562	0.000
10	0	26.32	34.09	4.79	0.10	10	26.32	34.09	22.26	558	0.056
25	0	25.19	34.15	4.64	0.15	25	25.19	34.15	22.66	520	0.137
50	0	19.36	34.56	4.03	0.70	50	19.36	34.56	24.60	335	0.232
75	0	17.21	34.60	3.97	0.90	75	17.21	34.60	25.16	282	0.309
92	22	15.21	34.54	3.86	0.95	100	14.90	34.52	25.66	234	0.375
139	22	13.32	34.49	3.97	1.00	150	13.10	34.47	25.98	204	0.486
185	22	12.36	34.45	3.58	1.10	200	12.05	34.45	26.17	187	0.586
278	22	10.38	34.42	3.16	1.40	300	10.05	34.34	26.44	160	0.765
324	36	9.71	34.31	4.42	1.50	400	8.15	34.20	26.64	141	0.922
405	36	8.05	34.20	3.14	1.50						
485	36	6.22	34.09	3.96	1.60						

SHINYO MARU; August 12, 1955; 1900-missing GCT; 35°27'N, 141°09'E; 0308 02 25.8 xxx2 04x2 1 25-x 2 250-3 x-x 2 x. 2

0		26.9	33.87	4.56	0.00	0	26.9	33.87	21.93	590	0.000
8	39	27.27	33.87	4.55	0.05	10	27.30	33.89	21.81	602	0.060
20	39	27.31	33.95	4.58	0.15	25	27.10	34.05	22.00	583	0.148
48	17	23.96	34.54	4.63	0.75	50	23.15	34.54	23.56	434	0.275
72	17	19.92	34.54	4.58	0.30	75	19.80	34.51	24.45	349	0.374
79	39	19.65	34.47	4.65	0.15	100	19.00	34.52	24.67	328	0.459
143	29	17.65	34.61	4.24	0.45	150	17.15	34.61	25.20	278	0.612
160	29	16.44	34.61	4.07	0.60						

SHINYO MARU; August 13, 1955; 0300-0510 GCT; 36°18'N, 141°31'E; 0207 01 246 36x3 xxxx 2 16-x 3-4 1023-3 x-x 2 x. 3

0		23.7	33.77	5.03	0.00	0	23.7	33.77	22.81	506	0.000
10	12	23.81	33.77	5.16	0.05	10	23.81	33.77	22.78	509	0.051
25	12	18.22	33.89	5.98	0.10	25	18.22	33.89	24.37	357	0.116
40	12	15.67	33.95	5.88	0.15	50	15.20	33.89	25.10	287	0.197
75	12	14.26	33.91	5.93	0.20	75	14.26	33.91	25.31	268	0.266
100	9	13.35	34.04	5.63	0.35	100	13.35	34.04	25.60	240	0.330
148	9	11.87	34.05	5.49	0.55	150	11.85	34.04	25.90	211	0.445
198	9	11.15	34.27	4.55	0.90	200	11.10	34.27	26.23	180	0.545
295	9	6.68	34.11	3.10	1.80	300	6.15	34.09	26.83	123	0.701
361	22	3.37	33.77	3.95	2.20	400	3.40	33.78	26.90	117	0.824
452	22	3.45	33.89	2.89	2.30	500	3.25	33.91	27.01	106	0.938
542	22	2.79	33.93	1.82	2.40						

SHINYO MARU; August 13, 1955; 1010-1235 GCT; 36°47'N, 141°42'E; 3603 xx 235 36x1 36x1 1 x-x x 640-3 x-x 2 x. 4

0		24.2	33.80	4.97	0.00	0	24.2	33.80	22.70	516	0.000
10	3	20.41	33.71	5.76	0.15	10	20.41	33.71	23.70	421	0.047
25	3	14.94	34.00	5.76	0.70	25	14.94	34.00	25.23	275	0.099
50	3	13.22	33.98	5.53	0.40	50	13.22	33.98	25.58	242	0.164
75	3	11.90	33.95	5.52	0.50	75	11.90	33.95	25.81	220	0.222
100	0	9.21	33.78	5.78	0.80	100	9.21	33.78	26.15	188	0.274
150	0	5.18	33.62	5.53	1.40	150	5.18	33.62	26.58	147	0.358
200	0	4.37	34.02	3.71	2.00	200	4.37	34.02	26.98	109	0.423
250	0	3.71	33.73	4.10	2.40	300	2.64	33.69	26.90	117	0.538
300	5	2.64	33.69	3.71	2.50	400	2.49	33.78	26.97	110	0.653
400	5	2.49	33.78	2.63	2.60	500	2.75	33.89	27.03	104	0.762
500	7	2.75	33.89	1.85	2.80	600	3.00	34.11	27.20	88	0.861
600	7	3.00	34.11	1.14	3.30						

5 SHINYO MARU; August 13, 1955; 1920-2135 GCT; 37°46'N, 141°54'E; 0513 13 231 xxx3 xxxx 1 19-x 3 370-3 x-x 2 x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϟ°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm^3/g	ΔD dyn. m
0		24.1	33.75	4.75	0.00	0	24.1	33.75	22.68	518	0.000
10	4	23.22	33.69	5.28	0.15	10	23.22	33.69	22.90	497	0.051
25	4	15.27	33.77	6.37	0.30	25	15.27	33.77	24.99	298	0.110
50	4	11.69	34.22	4.61	0.90	50	11.69	34.22	26.06	196	0.172
75	4	9.70	34.00	5.07	1.00	75	9.70	34.00	26.24	179	0.220
100	11	9.44	34.15	5.55	1.30	100	9.44	34.15	26.40	164	0.263
148	11	3.98	33.55	4.51	1.70	150	3.90	33.55	26.66	139	0.339
197	11	1.92	33.40	5.54	2.10	200	1.95	33.40	26.72	134	0.408
295	11	2.26	33.64	4.21	2.40						

6 SHINYO MARU; August 15, 1955; 1000-1100 GCT; 38°19'N, 141°52'E; 0402 02 235 0322 xxx2 2 x-x x 225-3 x-x 2 x.

0		22.4	33.89	5.25	0.15
121	30	11.78	33.98	5.53	0.50
162	30	10.65	33.93	5.69	0.65

7 SHINYO MARU; August 15, 1955; 1327-1425 GCT; 38°35'N, 142°05'E; 0900 xx 231 xxxx xxx2 1 x-x x 410-3 x-x x x.

0		22.6	33.84	5.17	0.15	0	22.6	33.84	23.19	470	0.000
10	0	21.13	33.80	5.32	0.15	10	21.13	33.80	23.56	434	0.045
25	0	20.19	34.00	5.40	0.10	25	20.19	34.00	23.96	396	0.108
50	0	17.80	34.04	5.55	0.25	50	17.80	34.04	24.60	335	0.199
75	0	16.76	34.05	5.29	0.30	75	16.76	34.05	24.85	311	0.279
96	16	16.24	34.07	5.34	0.35	100	16.10	34.07	25.03	294	0.355
144	16	13.99	34.11	5.45	0.40	150	13.30	34.09	25.64	236	0.489
192	16	8.53	33.78	5.65	0.95	200	8.15	33.78	26.31	173	0.593
288	16	3.94	33.86	3.18	2.00	300	3.75	33.86	26.92	115	0.740
385	16	2.49	33.78	2.65	2.40						

8 SHINYO MARU; August 15, 1955; 1915-2152 GCT; 39°02'N, 142°37'E; xxxx 02 223 00xx xxxx 2 19 3-4 1265-3 x-x 2 x.

0		22.3	32.85	5.15	0.35	0	22.3	32.85	22.56	530	0.000
10	0	15.23	32.95	7.25	0.35	10	15.23	32.95	24.35	359	0.044
25	0	7.08	33.10	7.74	0.85	25	7.08	33.10	25.92	210	0.087
50	0	1.90	33.35	6.53	1.90	50	1.90	33.35	26.68	137	0.131
75	0	2.54	33.33	6.74	2.00	75	2.54	33.33	26.62	143	0.166
100	0	2.06	33.33	6.50	2.00	100	2.06	33.33	26.66	139	0.202
150	4	1.79	33.46	5.54	2.20	150	1.79	33.46	26.77	129	0.269
200	4	1.84	33.55	4.48	2.40	200	1.84	33.55	26.84	122	0.332
300	4	2.51	33.77	2.71	2.50	300	2.51	33.77	26.96	111	0.450
395	4	2.74	33.89	2.11	2.70	400	2.80	33.89	27.04	103	0.559
493	4	3.04	34.07	1.58	2.80	500	3.00	34.07	27.17	91	0.658
592	4	2.88	34.11	1.15	2.80						

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

SHINYO MARU; August 16, 1955; 0315-0445 GCT; 39°40'N, 142°55'E; 0401 01 235 0142 04x1 2 19-x 3 1520-3 x-x 2 x. 9

0		24.3	33.03	4.79	0.25	0	24.3	33.03	22.07	577	0.000
10	0	23.91	33.03	4.83	0.25	10	23.91	33.03	22.20	564	0.057
25	0	10.38	33.10	8.56	0.55	25	10.38	33.10	25.42	257	0.119
50	0	4.57	33.31	6.48	1.30	50	4.57	33.31	26.41	163	0.172
75	0	2.86	33.35	6.42	1.50	75	2.86	33.35	26.60	145	0.210
100	0	2.35	33.39	6.49	1.70	100	2.35	33.39	26.67	138	0.246
150	0	1.85	33.39	6.15	2.30	150	1.85	33.39	26.72	134	0.314
200	0	1.94	33.50	4.73	2.40	200	1.94	33.50	26.80	126	0.379
300	0	2.31	33.75	2.88	2.60	300	2.31	33.75	26.97	110	0.498
400	2	2.80	33.89	1.85	2.70	400	2.80	33.89	27.04	103	0.606
500	2	3.04	34.04	1.31	2.80	500	3.04	34.04	27.13	95	0.707
600	2	2.97	34.18	1.06	3.00	600	2.97	34.18	27.23	85	0.800

SHINYO MARU; August 16, 1955; missing-1230 GCT; 40°20'N, 142°59'E; 1902 02 202 00xx 04x1 2 x-x x 1580-3 x-x 2 x. 10

0		19.2	33.19	5.66	0.40	0	19.2	33.19	23.60	430	0.000
10	1	12.56	33.71	6.07	0.55	10	12.56	33.71	25.50	249	0.034
25	1	9.13	33.42	5.95	0.70	25	9.13	33.42	25.89	212	0.069
50	1	8.65	33.69	5.82	0.80	50	8.65	33.69	26.17	186	0.119
75	1	5.54	33.51	5.71	1.30	75	5.54	33.51	26.45	159	0.162
100	4	2.53	33.31	5.86	1.70	100	2.53	33.31	26.60	145	0.200
150	4	0.58	33.30	6.10	2.20	150	0.58	33.30	26.73	133	0.270
200	4	0.85	33.37	5.51	2.40	200	0.85	33.37	26.76	130	0.335
300	4	1.32	33.50	4.49	2.60	300	1.32	33.50	26.84	122	0.461
380	19	1.62	33.60	3.87	2.70	400	1.70	33.62	26.91	116	0.581
475	19	1.94	33.71	3.18	2.80	500	2.05	33.75	26.99	108	0.694
571	19	2.34	33.84	2.32	3.00						

SHINYO MARU; August 16, 1955; 1900-2038 GCT; 41°06'N, 142°18'E; 2704 03 226 2720 xxxx 1 15-x 3-4 1350-3 x-x 2 x. 11

0		22.2	34.02	4.98	0.15	0	22.2	34.02	23.44	446	0.000
10	2	22.25	34.02	5.00	0.10	10	22.25	34.02	23.42	448	0.045
25	2	20.91	34.04	5.20	0.10	25	20.91	34.04	23.81	410	0.109
50	2	19.04	34.02	5.24	0.20	50	19.04	34.02	24.29	365	0.206
75	2	17.53	34.04	5.40	0.30	75	17.53	34.04	24.66	329	0.294
100	5	16.03	34.09	5.24	0.20	100	16.03	34.09	25.05	292	0.372
150	5	13.20	34.16	5.43	0.50	150	13.20	34.16	25.71	230	0.504
200	5	8.81	33.80	4.87	0.85	200	8.81	33.80	26.23	180	0.609
300	5	0.81	33.22	6.17	2.10	300	0.81	33.22	26.66	139	0.770
395	9	1.24	33.39	5.75	2.40	400	1.25	33.39	26.76	130	0.904
495	9	1.52	33.50	4.68	2.60	500	1.65	33.51	26.83	123	1.031
595	9	2.33	33.80	2.68	2.60						

SHINYO MARU; August 16, 1955; 2400-missing GCT; 41°26'N, 141°44'E; 2501 25 228 20x1 1 13-x 4 920-3 x-x 2 x. 12

0		21.8	34.07	5.04	0.15	0	21.8	34.07	23.60	430	0.000
10	10	21.02	34.11	5.04	0.15	10	21.02	34.11	23.83	408	0.042
25	10	20.68	34.11	5.11	0.45	25	20.68	34.11	23.92	400	0.103
50	10	19.70	34.11	5.00	0.35	50	19.70	34.11	24.18	375	0.200
75	10	18.36	34.18	5.18	0.25	75	18.36	34.18	24.58	337	0.289
100	5	17.19	34.20	5.15	0.55	100	17.19	34.20	24.86	310	0.371
150	5	14.03	34.20	5.27	0.55	150	14.03	34.20	25.58	242	0.511
200	5	6.53	33.53	5.70	1.20	200	6.53	33.53	26.35	169	0.615
298	5	2.57	33.39	6.02	2.10	300	2.55	33.39	26.67	138	0.770
397	4	2.06	33.55	4.53	2.40	400	2.10	33.55	26.83	123	0.901
497	4	2.57	33.80	2.60	2.40	500	2.60	33.80	26.99	108	1.018
596	4	2.93	33.96	1.60	2.40						

OBSERVED					
Z	W	T	S	O_2	PO_4-P
m	ϕ°	°C	‰	ml/L	μg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

UMITAKA MARU; September 13, 1955; 1144-1344 GCT; 34°54'N, 157°20'E; 2910 97 238 4933 32x2 1
1 x x 5000-1 19-11 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		24.8	33.98	4.83	0.10	0	24.8	33.98	22.64	522	0.000
10	10	24.83	33.96	4.68	0.10	10	24.83	33.96	22.63	523	0.052
25	10	24.86	33.96	4.62	0.10	25	24.86	33.96	22.61	525	0.131
49	10	18.13	34.31	5.51	0.20	50	18.05	34.31	24.75	321	0.237
74	10	13.86	34.36	4.47	0.80	75	13.80	34.36	25.75	225	0.306
98	10	11.91	34.22	4.35	0.90	100	11.85	34.22	26.03	199	0.360
148	10	10.12	34.27	4.58	0.90	150	10.10	34.27	26.39	165	0.453
197	10	8.22	34.05	4.73	1.30						

UMITAKA MARU; September 13, 1955; 1754-2134 GCT; 34°54'N, 158°38'E; 2906 01 239 2433 32x2 2
2 28-15 2 4000-1 xx-xx 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		25.3	34.11	4.75	0.10	0	25.3	34.11	22.59	527	0.000
10	10	25.41	34.10	4.59	0.10	10	25.41	34.10	22.54	532	0.053
25	10	25.46	34.15	4.40	0.10	25	25.46	34.15	22.57	529	0.133
49	10	19.42	34.36	5.26	0.25	50	19.25	34.36	24.47	348	0.243
74	10	15.02	34.36	4.78	0.60	75	14.95	34.36	25.51	249	0.348
98	10	12.94	34.40	4.60	0.70	100	12.85	34.40	25.99	203	0.375
148	10	10.49	34.27	4.73	0.80	150	10.40	34.27	26.33	171	0.470
197	10	8.45	34.02	4.71	1.10	200	8.40	34.02	26.46	158	0.554
282	20	6.46	33.96	3.97	1.70	300	6.05	33.95	26.73	133	0.704
375	20	4.59	34.89	3.47	2.00	400	4.45	34.91	26.88	118	0.833
466	20	4.22	34.02	2.41	2.20	500	4.10	34.05	27.04	103	0.947
559	20	3.85	34.09	1.69	2.40	600	3.80	34.15	27.14	94	1.049
746	20	3.55	34.29	1.02	2.70	700	3.65	34.25	27.23	84	1.143
932	20	3.11	34.36	0.85	3.00	800	3.45	34.31	27.32	77	1.230
1391	20	2.39	34.52	1.08	3.00	1000	3.00	34.38	27.43	66	1.386
						1200	2.70	34.45	27.50	60	1.526

UMITAKA MARU; September 14, 1955; 0333-0521 GCT; 34°55'N, 160°02'E; 2504 03 261 31x2 32x1 3
2 32-20 2 4000-1 12-04 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		25.6	34.07	4.76	0.10	0	25.6	34.07	22.46	539	0.000
10	18	25.63	34.07	4.23	0.10	10	25.63	34.07	22.45	540	0.054
24	18	25.50	34.07	4.64	0.10	25	25.50	34.07	22.49	537	0.135
48	18	25.34	34.07	4.68	0.10	50	25.45	34.11	22.53	533	0.269
72	18	21.35	34.36	4.55	0.15	75	20.40	34.38	24.18	375	0.383
95	18	17.52	34.58	3.77	0.25	100	17.15	34.58	25.67	281	0.466
190	18	12.19	34.29	3.89	0.70	150	13.95	34.49	25.83	218	0.593
285	18	8.72	34.09	4.34	1.00	200	11.75	34.27	26.09	193	0.698
380	18	6.59	34.02	3.78	1.60	300	8.30	34.07	26.52	153	0.876
467	18	5.33	34.02	2.96	1.80	400	6.30	34.02	26.75	131	1.023
747	18	3.98	34.18	1.36	2.60	500	5.05	34.04	26.93	114	1.151
934	18	3.55	34.27	0.89	2.80	600	4.50	34.11	27.04	103	1.265
1402	18	2.65	34.47	0.73	3.00	700	4.15	34.15	27.12	96	1.371
						800	3.85	34.20	27.17	90	1.471
						1000	3.40	34.29	27.29	80	1.655
						1200	3.05	34.38	27.42	67	1.817

UMITAKA MARU; September 14, 1955; 1138-1318 GCT; 34°58'N, 161°30'E; 2006 01 251 204x 32x1 4
1 x x 4500-1 xx0xx 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		25.8	34.67	4.74	0.10	0	25.8	34.67	22.83	504	
10	7	-	34.67	4.45	0.10	10		34.67			
25	7	-	34.74	4.68	0.10	25		34.74			
50	7	-	34.67	5.17	0.10	50		34.67			

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
5		UMITAKA MARU; September 14, 1955; 1933-2139 GCT; 35°01'N, 162°56'E; 2507 01 251 2542 32x1									
2 3426 2 5000-1 xx-xx 1 x.											
0		24.9	34.24	4.78	0.10	0	24.9	34.24	22.82	505	0.000
8	34	24.91	34.24	4.57	0.10	10	24.90	34.25	22.83	504	0.051
21	34	24.97	34.29	4.74	0.10	25	24.95	34.29	22.84	503	0.126
41	34	24.95	34.25	4.72	0.50	50	24.25	34.29	23.05	483	0.250
62	34	22.41	34.40	5.32	0.05	75	20.80	34.49	24.18	375	0.358
83	34	19.95	34.56	5.05	0.00	100	18.50	34.60	24.86	310	0.445
124	34	16.85	34.61	4.76	0.10	150	15.60	34.54	25.51	249	0.587
166	34	14.97	34.51	5.06	0.20	200	14.05	34.49	25.80	221	0.707
249	34	13.36	34.45	4.57	0.80	300	12.50	34.42	26.06	196	0.922
332	34	12.04	34.38	4.25	0.90	400	10.85	34.29	26.27	176	1.116
415	34	10.54	34.27	4.40	0.90	500	8.65	34.09	26.51	154	1.290
497	34	8.67	34.11	4.42	1.40	600	7.10	34.02	26.66	139	1.446
663	34	6.25	33.98	3.51	1.50	700	5.80	33.96	26.78	128	1.589
829	34	4.65	33.87	2.66	1.70	800	4.85	33.89	26.83	124	1.724
1244	34	3.59	34.29	0.83	2.90	1000	4.20	33.98	26.97	110	1.976
						1200	3.70	34.22	27.22	86	2.190
6		UMITAKA MARU; September 15, 1955; 0217-0505 GCT; 35°02'N, 164°01'E; 2508 03 259 2542 30x1									
2 22-16 2 5500-1 35-03 1 x.											
0		25.4	34.31	4.84	0.30	0	25.4	34.31	22.82	505	0.000
9	20	25.12	34.29	4.61	0.40	10	25.10	34.29	22.80	507	0.051
23	20	24.98	34.29	4.78	0.25	25	24.80	34.31	22.90	497	0.126
47	20	20.77	34.42	5.72	0.20	50	20.35	34.42	24.25	368	0.235
70	20	16.22	34.47	5.66	0.60	75	15.65	34.47	25.44	254	0.313
94	20	14.09	34.42	5.23	0.60	100	13.80	34.42	25.79	222	0.373
141	20	12.52	34.36	4.82	0.80	150	12.35	34.34	26.03	199	0.483
188	20	11.56	34.33	4.65	0.70	200	11.35	34.31	26.20	183	0.581
282	20	9.91	34.20	4.61	0.90	300	9.80	34.20	26.45	159	0.758
376	20	9.82	34.47	4.92	0.80	400	8.75	34.42	26.72	134	0.912
444	20	6.63	33.96	3.77	1.60	500	5.80	34.00	26.81	125	1.048
534	20	5.47	-	-	-	600	4.80	34.07	26.98	109	1.171
710	20	4.00	34.15	1.46	2.40	700	4.05	34.15	27.12	96	1.280
888	20	3.56	34.27	0.84	2.80	800	3.75	34.20	27.20	88	1.379
1331	20	2.54	34.49	0.78	2.90	1000	3.35	34.34	27.35	74	1.555
						1200	2.85	34.42	27.46	63	1.707
7		UMITAKA MARU; September 15, 1955; 1122-1302 GCT; 35°02'N, 165°28'E; 2518 03 252 2542 30x1									
1 x x 5500-1 xx-xx 1 x.											
0		25.4	34.42	4.69	0.10	0	25.4	34.42	22.74	513	0.000
10	10	24.99	34.40	4.77	0.10	10	24.99	34.40	22.91	496	0.051
25	10	25.28	34.40	4.67	0.10	25	25.28	34.40	22.82	505	0.126
46	22	19.85	34.40	5.61	0.40	50	19.10	34.43	24.58	337	0.231
71	22	16.32	34.54	5.57	0.60	75	15.95	34.54	25.44	255	0.306
93	22	14.59	34.51	4.83	0.70	100	14.35	34.51	25.75	226	0.367
139	22	13.34	34.47	4.05	1.10	150	13.10	34.45	25.97	205	0.476
185	22	12.34	34.40	4.50	1.00	200	12.05	34.38	26.12	191	0.578
278	22	10.43	34.25	4.62	0.80	300	9.95	34.22	26.37	167	0.763
371	22	8.45	34.09	4.31	1.10	400	7.80	34.05	26.58	147	0.927
464	22	6.41	34.00	3.65	1.40	500	5.90	33.98	26.78	128	1.071
556	22	5.11	33.95	3.16	2.10	600	4.75	33.96	26.90	117	1.200
742	22	4.08	34.07	1.76	2.40	700	4.15	34.04	27.02	105	1.317
927	22	3.75	34.22	1.03	2.70	800	3.95	34.13	27.12	96	1.424
1391	22	2.78	34.51	0.66	2.70	1000	3.60	34.27	27.27	81	1.616
						1200	3.15	34.40	27.41	68	1.780

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

UMITAKA MARU; September 15, 1955; 1920-2102 GCT; 35°03'N, 167°00'E; 2618 03 258 2542 24x1 8
1 25-20 2 5200-1 xx-xx 1 x.

0		26.0	34.36	4.73	0.60	0	26.0	34.36	22.57	529	0.000
8	34	25.93	34.29	4.55	0.10	10	25.95	34.29	22.54	532	0.053
21	34	26.03	34.29	4.59	0.40	25	25.95	34.38	22.61	525	0.133
41	34	24.97	34.65	4.91	0.10	50	23.70	34.63	23.47	443	0.254
62	34	21.96	34.58	4.92	0.10	75	20.95	34.67	24.27	367	0.356
83	34	20.26	34.70	4.46	0.30	100	18.85	34.69	24.84	312	0.443
124	34	17.54	34.67	4.40	0.50	150	16.95	34.67	25.28	270	0.590
166	34	16.62	34.67	4.71	0.60	200	16.00	34.65	25.50	249	0.721
249	34	15.23	34.58	4.53	0.60	300	14.75	34.54	25.70	230	0.965
347	46	14.21	34.51	4.29	0.60	400	13.15	34.47	25.96	206	1.193
417	46	12.79	34.45	-	0.60	500	10.95	34.31	26.27	176	1.395
486	46	11.39	34.33	4.15	0.80	600	8.55	34.04	26.46	158	1.573
625	46	7.95	34.07	4.27	1.20	700	6.35	34.02	26.76	130	1.727
764	46	5.51	33.96	2.99	1.20	800	5.30	34.00	26.87	119	1.861
1112	46	3.68	34.24	0.96	2.20	1000	4.25	34.15	27.10	98	2.097

UMITAKA MARU; September 16, 1955; 0254-0419 GCT; 35°02'N, 168°43'E; 2718 60 240 2542 24x1 9
1 19-15 3 5300-1 00-00 1 x.

0		25.6	34.54	4.77	0.10	0	25.6	34.54	22.83	504	0.000
8	32	25.64	34.51	4.47	0.10	10	25.65	34.51	22.80	507	0.051
21	32	25.59	34.51	4.54	0.20	25	25.35	34.52	22.89	498	0.126
42	32	22.81	34.63	5.05	0.70	50	19.80	34.69	24.59	336	0.231
63	32	19.40	34.76	5.50	0.15	75	18.70	34.74	24.92	305	0.312
85	32	18.15	34.70	4.53	0.30	100	17.70	34.70	25.13	285	0.386
127	32	16.92	34.70	4.41	0.50						

UMITAKA MARU; September 16, 1955; 1054-1210 GCT; 35°02'N, 170°06'E; 2504 50 244 2542 24x0 10
1 x x 5300-1 xx-xx 1 x.

0		25.3	34.54	4.84	0.10	0	25.3	34.54	22.93	494	0.000
10	0	25.38	34.56	4.59	0.25	10	25.38	34.56	22.92	495	0.050
25	0	25.42	34.56	4.75	0.30	25	25.42	34.56	22.88	499	0.124
50	9	20.79	34.63	5.54	0.30	50	20.79	34.63	24.28	366	0.233
75	9	16.84	34.63	5.02	0.50	75	16.84	34.63	25.28	270	0.313
98	9	15.91	34.63	4.43	0.50	100	15.85	34.63	25.53	247	0.378
148	9	14.61	34.54	4.29	0.90	150	14.60	34.54	25.72	229	0.499
196	9	13.52	34.47	4.44	0.70	200	13.45	34.47	25.92	210	0.612
294	9	11.64	34.33	4.54	0.80	300	11.55	34.33	26.17	186	0.817
392	9	9.95	34.22	4.16	1.00	400	9.75	34.20	26.39	142	1.001
490	9	7.56	34.04	4.09	1.40	500	7.40	34.04	26.63	135	1.162
980	9	3.29	34.31	0.79	2.50	600	6.00	34.09	26.86	120	1.300
1469	9	2.51	34.49	0.88	2.40	700	4.85	34.15	27.04	103	1.419
						800	4.00	34.22	27.18	90	1.523
						1000	3.25	34.31	27.33	76	1.703
						1200	3.00	34.38	27.42	67	1.859

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ✕°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
11	UMITAKA MARU; September 16, 1955; 1851-2038 GCT; 35°06'N, 171°47'E; 2507 03 248 2542 24x1 1 25-20 3 660-3 xx-xx 1 x.										
0		25.4	34.42	4.79	0.10	0	25.4	34.42	22.80	507	0.000
10	4	25.41	34.42	4.71	0.10	10	25.41	34.42	22.79	508	0.051
25	4	25.14	34.43	4.79	0.20	25	25.14	34.43	22.89	498	0.126
41	34	18.93	34.61	5.77	0.40	50	24.40	34.65	23.28	461	0.247
66	34	17.25	34.65	4.76	0.40	75	18.20	34.67	24.99	298	0.343
83	34	16.86	34.65	4.53	0.50	100	17.00	34.65	25.26	272	0.415
124	34	15.65	34.61	4.64	0.50	150	16.45	34.58	25.34	265	0.552
166	34	-	34.56	4.64	0.65	200	14.50	34.52	25.74	227	0.678
249	34	13.59	34.47	4.38	1.10	300	12.35	34.40	26.08	194	0.896
332	34	11.75	34.36	4.46	0.90	400	10.70	34.24	26.26	177	1.090
415	34	10.51	34.22	4.84	1.05						
497	34	9.43	34.15	4.36	1.10						
12	UMITAKA MARU; September 17, 1955; 0803-0853 GCT; 35°03'N, 171°38'E; 2216 01 255 2521 22x1 1 x x 305-3 xx-xx 1 x.										
0		25.5	34.49	4.82	0.00	0	25.5	34.49	22.82	505	0.000
9	24	25.54	34.49	4.72	0.10	10	25.55	34.49	22.81	506	0.051
23	24	25.02	34.49	4.85	0.10	25	24.75	34.52	23.08	480	0.125
46	24	20.09	34.67	5.66	0.10	50	19.50	34.67	24.66	329	0.226
69	24	17.81	34.67	5.57	0.20	75	17.50	34.67	25.15	283	0.303
91	24	16.84	34.67	4.91	0.40	100	16.60	34.67	25.37	262	0.372
137	24	15.60	34.63	4.46	0.50	150	15.30	34.61	25.64	236	0.499
183	24	14.71	34.58	4.61	0.60	200	13.85	34.54	25.88	213	0.614
228	24	11.93	34.38	4.64	0.75						
13	UMITAKA MARU; September 18, 1955; 0303-0428 GCT; 35°06'N, 172°10'E; 2116 03 271 2521 18x1 2 40-20 2 3000-1 xx-xx 1 x.										
0		25.6	34.47	4.79	0.10	0	25.6	34.47	22.78	509	0.000
10	16	25.54	34.45	4.79	0.10	10	25.54	34.45	22.83	504	0.051
24	16	25.19	34.49	4.83	0.10	25	25.10	34.49	22.95	493	0.126
48	16	22.52	34.47	4.82	0.10	50	21.15	34.51	24.10	383	0.236
72	16	17.85	34.63	5.68	0.20	75	17.60	34.63	25.11	287	0.320
96	16	16.48	34.65	4.77	0.40	100	16.35	34.65	25.37	262	0.389
144	16	15.36	34.58	4.73	0.55	150	15.25	34.58	25.62	238	0.516
189	22	14.69	34.58	4.45	0.60	200	14.50	34.58	25.78	223	0.634
284	22	12.62	34.40	4.56	0.85	300	12.15	34.36	26.09	193	0.849
378	22	10.48	34.25	4.41	1.00	400	10.05	34.22	26.35	169	1.038
473	22	8.28	34.13	4.04	1.30	500	7.40	34.05	26.64	141	1.201
568	22	5.82	33.89	3.85	1.70	600	5.45	33.91	26.78	128	1.343
757	22	4.35	34.07	2.08	2.40	700	4.65	34.02	26.94	113	1.471
940	22	3.84	34.09	4.06	1.20	800	4.10	34.07	27.05	102	1.586
1418	22	2.59	34.45	0.81	2.60	1000	3.70	34.13	27.14	94	1.692
						1200	3.15	34.27	27.21	87	1.790

OBSERVED					
Z	W	T	S	O_2	PO_4-P
m	∢°	°C	‰	ml/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_T	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

UMITAKA MARU; September 18, 1955; 1033-1158 GCT; 35°04'N, 173°10'E; 2016 02 259 2121 20x1 — 14
1 x x 5000-1 xx-xx 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		25.1	34.40	4.83	0.10	0	25.1	34.40	22.88	499	0.000
10	12	25.01	34.38	4.80	0.10	10	25.01	34.38	22.89	498	0.050
24	12	24.78	34.38	4.83	0.10	25	24.70	34.40	23.00	488	0.124
49	12	20.92	34.56	5.43	0.10	50	20.80	34.58	24.25	368	0.232
65	30	18.94	34.65	5.51	0.10	75	18.05	34.65	25.01	296	0.315
87	30	17.24	34.65	4.85	0.35	100	16.40	34.63	25.41	258	0.385
130	30	15.34	34.58	4.95	0.30	150	15.05	34.56	25.65	235	0.511
177	31	14.65	34.54	4.67	0.50	200	14.05	34.52	25.82	219	0.627
265	31	12.70	34.42	4.55	0.70	300	12.05	34.36	26.11	192	0.839
354	31	11.09	34.29	4.91	0.70	400	10.20	34.24	26.34	170	1.028
442	31	9.43	34.18	4.55	1.10	500	8.25	34.09	26.55	150	1.196
530	31	7.52	34.04	4.25	1.40	600	6.00	34.02	26.80	126	1.342
707	31	4.51	34.00	2.32	2.20	700	4.60	34.00	26.94	113	1.469
884	31	3.88	34.22	1.36	2.80	800	4.05	34.11	27.09	98	1.582
1325	31	2.69	34.45	0.61	2.90	1000	3.55	34.27	27.27	81	1.776
						1200	3.05	34.38	27.41	68	1.940

UMITAKA MARU; September 18, 1955; 1826-2058 GCT; 35°04'N, 174°42'E; 2310 03 255 2321 22x1 — 15
2 36-8 2 4000-1 xx-xx 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		25.4	34.40	4.86	0.10	0	25.4	34.40	22.78	509	0.000
10	6	25.40	34.40	4.88	0.10	10	25.40	34.40	22.78	509	0.051
25	6	25.35	34.40	4.86	0.10	25	25.35	34.40	22.80	507	0.127
50	6	16.38	34.45	6.96	0.10	50	16.38	34.45	25.26	272	0.225
75	2	14.00	34.45	5.18	0.55	75	14.00	34.45	25.78	223	0.295
100	2	13.25	34.43	5.14	0.70	100	13.25	34.43	25.92	210	0.350
150	2	11.87	34.33	5.05	0.80	150	11.87	34.33	26.11	192	0.453
193	12	11.33	34.31	4.80	0.85	200	11.25	34.29	26.20	183	0.549
290	12	9.37	34.13	4.68	1.10	300	9.10	34.11	26.43	161	0.727
386	12	7.07	34.00	4.07	1.40	400	6.85	33.98	26.66	139	0.883
483	12	5.62	33.95	4.45	1.80	500	5.45	33.95	26.81	125	1.021
580	12	4.85	33.98	2.51	2.20	600	4.75	34.00	26.93	114	1.146
773	12	3.96	34.18	1.08	2.80	700	4.30	34.11	27.06	101	1.260
966	12	3.88	34.29	0.72	2.80	800	3.95	34.20	27.17	91	1.363
1449	12	2.44	34.49	1.32	2.80	1000	3.80	34.31	27.28	80	1.549
						1200	3.20	34.38	27.39	70	1.715

UMITAKA MARU; September 19, 1955; 0217-0407 GCT; 35°02'N, 176°39'E; 2308 03 267 2321 22x1 — 16
2 35-6 2 2112-3 xx-xx 1 x.

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_T	ΔD
0		26.0	34.67	4.80	0.10	0	26.0	34.67	22.80	507	0.000
10	4	25.62	34.69	4.80	0.00	10	25.62	34.69	22.93	494	0.050
25	4	25.50	34.69	4.90	0.10	25	25.50	34.69	22.97	491	0.124
49	4	18.90	34.70	5.67	0.20	50	22.10	34.70	23.99	393	0.235
74	10	17.37	34.70	5.08	0.25	75	17.30	34.70	25.23	275	0.319
98	10	16.65	34.69	4.92	0.45	100	16.60	34.69	25.39	260	0.388
148	10	16.03	34.65	4.92	0.75	150	15.60	34.65	25.60	240	0.515
168	12	15.32	34.60	5.19	0.60	200	14.85	34.56	25.69	231	0.635
252	12	13.83	34.49	4.48	0.70	300	12.75	34.42	26.01	201	0.858
336	12	11.81	34.36	4.34	1.10	400	10.35	34.24	26.32	172	1.053
420	12	9.82	34.20	4.39	1.00	500	8.00	34.07	26.56	149	1.222
504	12	7.92	34.07	3.96	1.00	600	5.60	34.02	26.84	122	1.365
672	12	4.56	33.98	2.47	2.20	700	4.40	34.02	26.98	109	1.487
840	12	3.88	34.16	1.52	2.20	800	3.95	34.13	27.12	96	1.596
1259	12	3.08	34.40	0.54	2.40	1000	3.55	34.25	27.26	82	1.790
						1200	3.15	34.38	27.40	69	1.956

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UMITAKA MARU; September 19, 1955; 1017-1152 GCT; 35°02'N, 178°01'E; 2416 02 248 2321 22x1 1 x x 3200-1 xx-xx 1 x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W *	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		24.6	34.40	4.89	0.15	0	24.6	34.40	23.04	484	0.000
10	5	24.60	34.42	4.93	0.20	10	24.60	34.42	23.04	484	0.048
25	5	22.93	34.34	5.31	0.15	25	22.93	34.34	23.48	442	0.108
50	5	16.64	34.54	6.28	0.15	50	16.64	34.54	25.26	272	0.198
75	5	15.34	34.56	5.05	0.40	75	15.34	34.56	25.58	242	0.263
100	5	14.80	34.54	4.98	0.60	100	14.80	34.54	25.69	231	0.322
150	5	13.74	-	5.20	0.60	150	13.74	34.47	25.85	216	0.436
197	5	13.37	34.42	4.20	0.60	200	13.30	34.42	25.90	211	0.545
295	5	11.77	34.33	4.75	0.80	300	11.65	34.33	26.16	187	0.751
394	5	9.88	34.16	4.69	1.00	400	9.75	34.16	26.36	168	0.937
492	5	7.60	34.02	4.12	1.30	500	7.45	34.02	26.68	137	1.097
590	5	5.92	33.95	3.36	1.40	600	5.80	33.95	26.89	117	1.231
787	5	4.40	34.07	1.77	2.00	700	4.90	34.02	26.93	114	1.355
984	5	3.88	34.25	0.92	2.40	800	4.35	34.09	27.04	103	1.472
1476	5	2.57	34.45	0.59	2.40	1000	3.85	34.25	27.14	94	1.578
						1200	3.30	34.34	27.35	74	1.670

18

UMITAKA MARU; September 20, 1955; 0208-0328 GCT; 34°17'N, 177°49'E; 2714 02 257 1433 xxx2 1 34-6 2 3000-3 21-02 1 x.

0		24.8	34.40	4.89	0.30	0	24.8	34.40	22.97	491	0.000
10	2	25.00	34.36	4.93	0.20	10	25.00	34.36	22.88	499	0.050
25	2	24.25	34.40	4.95	0.15	25	24.25	34.40	23.14	474	0.122
50	2	17.57	34.54	6.21	0.15	50	17.57	34.54	25.04	293	0.219
75	3	15.58	34.54	5.55	0.30	75	15.58	34.54	25.52	248	0.287
100	3	14.69	34.51	5.14	0.60	100	14.69	34.51	25.68	232	0.347
150	3	13.79	34.45	5.19	0.60	150	13.79	34.45	25.83	218	0.462
186	10	13.41	34.42	4.86	0.70	200	13.10	34.40	25.93	209	0.571
279	10	11.54	34.31	4.94	1.00	300	11.20	34.27	26.20	183	0.773
372	10	9.97	34.18	4.84	1.20	400	9.35	34.15	26.41	163	0.953
466	10	7.84	34.04	4.46	1.20	500	7.05	34.00	26.65	140	1.112
557	10	5.96	33.96	3.70	2.20	600	5.50	33.96	26.82	124	1.251
743	10	4.71	33.95	2.69	1.70	700	4.85	33.95	26.88	118	1.379
929	10	3.85	34.13	1.52	1.90	800	4.45	34.00	26.96	111	1.501
1393	10	2.92	34.40	1.17	2.00	1000	3.75	34.16	27.17	91	1.719
						1200	3.35	34.29	27.31	78	1.903

19

UMITAKA MARU; September 20, 1955; 1013-1126 GCT; 34°58'N, 179°10'E; 0115 01 230 xxx2 xxx2 1 x x 3500-1 xx-xx 1 x.

0		24.3	34.24	5.00	0.20	0	24.3	34.24	23.00	488	0.000
10	8	24.37	34.20	4.95	0.25	10	24.37	34.20	22.91	496	0.049
25	8	24.42	34.20	4.91	0.15	25	24.42	34.20	22.89	498	0.123
49	10	16.89	34.51	6.55	0.15	50	16.75	34.51	25.22	276	0.221
74	10	15.09	34.49	5.97	0.20	75	15.05	34.49	25.59	241	0.286
99	10	14.31	34.49	5.23	0.50	100	14.30	34.49	25.75	226	0.345
148	10	13.23	34.40	5.22	0.70	150	13.25	34.40	25.90	211	0.456
188	18	12.66	34.36	5.14	1.40	200	12.45	34.34	26.02	200	0.561
282	18	11.30	34.27	5.08	0.90	300	11.00	34.25	26.22	181	0.758
375	18	9.61	34.20	4.94	1.10	400	9.20	34.11	26.42	162	0.937
469	18	7.76	34.02	4.66	1.40	500	7.10	33.98	26.63	142	1.094
563	18	6.04	33.93	3.64	2.60	600	5.80	33.93	26.75	131	1.240
938	18	3.85	33.96	3.11	2.20	700	5.25	33.95	26.84	122	1.374
1408	18	3.46	34.27	1.15	2.00	800	4.65	33.95	26.90	117	1.502
						1000	3.80	34.00	27.03	104	1.740
						1200	3.65	34.13	27.15	93	1.956

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δT_3 10^{-5} cm/g	ΔD dyn. m

UMITAKA MARU; September 20, 1955; 1828-1948 GCT; 35°00'N, 179°23'W; 0207 03 231 32x2 1 40-5 2 4200-1 xx-xx 1 x. 20

0		24.6	34.31	4.92	0.15	0	24.6	34.31	22.82	505	0.000
10	2	24.56	34.29	4.88	0.10	10	24.56	34.29	22.97	491	0.050
25	2	24.56	34.31	4.86	0.30	25	24.56	34.31	22.97	491	0.124
50	5	16.91	34.54	6.32	0.40	50	16.91	34.54	25.20	278	0.220
75	5	15.25	34.54	5.22	0.40	75	15.25	34.54	25.59	241	0.285
100	5	14.95	34.54	5.04	0.70	100	14.95	34.54	25.65	235	0.346
150	5	14.82	34.34	5.23	0.35	150	14.82	34.53	25.67	233	0.464
198	7	-	34.40	5.01	0.95	200	13.65	34.40	25.81	220	0.580
297	7	11.90	34.34	5.03	0.95	300	11.80	34.34	26.14	189	0.791
396	7	10.53	34.24	5.02	1.00	400	10.50	34.24	26.20	183	0.985
495	7	9.07	34.11	5.02	1.40	500	9.00	34.11	26.44	160	1.168
594	7	7.40	34.02	4.45	2.10	600	7.35	34.02	26.62	143	1.326
792	7	5.19	33.95	2.90	2.30	700	6.05	33.98	26.76	130	1.472
990	7	4.31	34.09	1.41	3.00	800	5.15	33.95	26.84	122	1.607
1485	7	3.05	34.34	0.75	2.50	1000	4.30	34.09	27.05	102	1.849
						1200	3.80	34.20	27.14	94	2.061

UMITAKA MARU; September 21, 1955; 0207-0410 GCT; 35°01'N, 177°54'W; 1212 02 231 1631 32x2 2 35-15 2 4500-1 25-03 1 x. 21

0		23.9	34.31	4.97	0.20	0	23.9	34.31	23.17	471	0.000
10	2	23.94	34.31	4.94	0.25	10	23.94	34.31	23.16	472	0.047
25	2	23.80	34.29	4.97	0.10	25	23.80	34.29	23.18	471	0.118
49	10	18.55	34.51	6.19	0.20	50	18.10	34.51	24.88	308	0.216
74	10	15.25	34.51	6.04	0.25	75	15.20	34.51	25.56	244	0.285
98	12	14.44	34.47	5.37	0.60	100	14.40	34.47	25.72	229	0.336
147	12	13.45	34.42	5.28	0.60	150	13.40	34.42	25.87	214	0.459
196	22	12.70	34.36	5.22	0.70	200	12.80	34.36	25.96	206	0.566
278	22	11.33	34.29	4.93	0.70	300	11.05	34.27	26.23	180	0.765
371	28	10.07	34.18	4.92	1.05	400	9.70	34.15	26.36	168	0.947
441	28	9.05	34.09	4.97	1.00	500	7.80	34.00	26.54	151	1.115
530	28	7.20	33.95	4.29	1.50	600	6.15	33.96	26.74	132	1.264
706	28	5.12	33.98	2.22	2.60	700	5.15	33.98	26.87	119	1.397
883	28	-	34.18	0.98	2.60	800	4.85	34.09	26.99	108	1.519
1324	28	2.89	34.36	0.54	2.70	1000	4.10	34.24	27.18	90	1.735
1766	28	2.31	34.51	0.67	2.60	1200	3.35	34.31	27.32	77	1.919
2207	28	1.89	34.58	1.47	2.60	1500	2.55	34.42	27.48	62	2.153
						2000	2.05	34.54	27.63	47	2.473

UMITAKA MARU; September 21, 1955; 1010-1145 GCT; 34°35'N, 176°55'W; 0311 03 232 03x1 02x1 1 x x 3000-1 xx-xx 1 x. 22

0		24.5	34.31	4.89	0.30	0	24.5	34.31	22.99	489	0.000
10	3	24.50	34.31	4.92	0.10	10	24.50	34.31	22.99	489	0.049
25	3	24.50	34.31	4.85	0.10	25	24.50	34.31	22.99	489	0.122
50	3	17.96	34.51	6.19	0.10	50	17.96	34.51	24.93	304	0.222
74	8	15.66	34.56	5.79	0.25	75	15.60	34.56	25.53	247	0.291
99	8	14.44	34.51	5.14	0.45	100	14.40	34.51	25.74	227	0.351
149	8	13.34	34.45	5.15	0.65	150	13.30	34.45	25.93	209	0.462
184	17	12.77	34.40	4.93	0.40	200	12.45	34.38	26.04	198	0.566
276	17	11.10	34.29	5.14	0.90	300	10.60	34.25	26.28	175	0.759
368	17	9.53	34.16	4.90	1.10	400	8.85	34.13	26.48	156	0.932
461	17	7.52	34.04	4.29	1.30	500	6.80	33.98	26.67	138	1.086
553	17	5.96	33.96	3.28	1.80	600	5.05	34.04	26.93	114	1.219
645	17	4.37	34.13	1.42	2.30	700	3.95	34.15	27.14	94	1.329
921	17	3.68	34.25	0.66	2.60	800	3.60	34.20	27.21	87	1.426
1382	17	2.54	34.47	0.54	2.60	1000	3.50	34.29	27.29	80	1.608
						1200	3.00	34.38	27.42	67	1.770

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ✲°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm³/g	ΔD dyn. m
23	UMITAKA MARU; September 21, 1955; 1754-1903 GCT; 33°40'N, 175°35'W; 0511 02 233 0232 04x1 1 28-7 3 2500-1 xx-xx 1 x.										
0		24.3	34.65	4.93	0.10	0	24.3	34.65	23.31	458	0.000
10	4	24.31	34.65	4.93	0.10	10	24.31	34.65	23.30	459	0.460
25	4	24.27	34.61	4.88	0.10	25	24.27	34.61	23.29	460	0.115
50	4	17.79	34.61	6.26	0.10	50	17.79	34.61	25.04	293	0.209
74	10	16.04	34.60	5.88	0.20	75	16.00	34.60	25.46	253	0.278
98	10	15.18	34.56	5.16	0.40	100	15.15	34.56	25.63	237	0.340
148	10	14.39	34.54	5.14	0.55	150	14.45	34.54	25.76	225	0.458
195	11	13.83	34.51	5.01	0.60	200	13.75	34.51	25.87	214	0.570
293	11	12.38	34.38	5.03	0.80	300	12.30	34.36	26.06	196	0.781
390	11	10.78	34.25	4.92	0.95	400	10.55	34.24	26.28	175	0.974
488	11	8.43	34.09	4.48	1.30	500	8.20	34.07	26.54	151	1.145
586	11	6.42	34.02	3.56	1.70	600	6.35	34.02	26.76	130	1.293
781	11	4.48	34.09	1.56	2.40	700	5.30	34.05	26.92	115	1.424
976	11	3.74	34.27	0.77	2.70	800	4.40	34.11	27.06	101	1.540
1464	11	2.62	34.54	0.66	2.60	1000	3.70	34.29	27.27	81	1.738
						1200	3.25	34.40	27.42	67	1.904
24	UMITAKA MARU; September 22, 1955; 0149-0304 GCT; 33°05'N, 174°45'W; 0216 03 238 0232 02x1 2 33-15 2 3000-3 xx-xx 1 x.										
0		24.7	34.52	4.88	0.10	0	24.7	34.52	23.10	478	0.000
10	5	24.63	34.47	4.87	0.10	10	24.63	34.47	23.08	480	0.048
25	5	24.34	34.60	4.98	0.10	25	24.34	34.60	23.26	463	0.119
50	5	16.91	34.63	6.03	0.30	50	16.91	34.63	25.27	271	0.211
70	20	15.78	34.58	5.25	0.40	75	15.60	34.56	25.53	247	0.276
94	20	15.04	34.47	5.03	0.45	100	14.85	34.45	25.61	239	0.338
141	20	13.95	34.42	5.24	0.15	150	13.80	34.40	25.77	224	0.455
183	25	13.29	34.33	5.11	0.40	200	13.10	34.31	25.85	216	0.568
275	25	11.91	34.22	4.94	0.65	300	11.60	34.18	26.05	197	0.781
367	25	10.47	34.11	4.84	1.00	400	9.85	34.07	26.27	176	0.976
458	25	8.63	34.00	4.48	1.10	500	7.75	34.02	26.56	149	1.147
550	25	6.84	34.07	3.83	1.50	600	6.05	34.13	26.88	118	1.288
733	25	4.62	34.27	1.76	2.20	700	4.95	34.24	27.09	98	1.404
917	25	3.68	34.49	0.60	2.60	800	4.30	34.36	27.26	82	1.502
1375	25	2.65	34.47	0.56	2.40	1000	3.50	34.49	27.45	64	1.664
						1200	3.05	34.47	27.47	62	1.806
25	UMITAKA MARU; September 23, 1955; 0029-0159 GCT; 33°10'N, 176°15'W; 0311 01 238 0332 02x1 2 45-20 2 3000-3 xx-xx 1 x.										
0		24.6	34.47	4.88	0.15	0	24.6	34.47	23.09	479	0.000
10	8	24.61	34.47	4.82	0.10	10	24.61	34.47	23.08	480	0.048
24	8	24.58	34.58	4.97	0.10	25	24.05	34.58	23.33	456	0.118
48	8	17.01	34.56	6.18	0.10	50	16.85	34.56	25.23	275	0.210
72	16	15.61	34.56	5.62	0.25	75	15.55	34.56	25.54	246	0.276
96	16	15.09	34.51	5.22	0.35	100	15.05	34.51	25.61	239	0.337
144	16	14.30	34.47	5.19	0.50	150	14.20	34.45	25.74	227	0.456
261	38	12.59	34.36	5.12	0.65	200	13.45	34.36	25.83	218	0.569
348	38	10.55	34.25	5.01	0.90	300	11.65	34.33	26.16	187	0.778
435	38	8.69	34.11	4.72	1.20	400	9.45	34.16	26.42	162	0.960
522	38	7.04	34.00	3.96	1.70	500	7.45	34.04	26.62	143	1.120
696	38	4.86	34.04	2.15	2.10	600	5.85	34.02	26.82	124	1.264
870	38	3.82	34.24	1.00	2.70	700	4.85	34.04	26.97	110	1.392
1305	38	2.80	34.47	0.58	2.20	800	4.25	34.16	27.12	96	1.503
						1000	3.55	34.31	27.30	79	1.693
						1200	3.05	34.42	27.45	64	1.853

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϟ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m

UMITAKA MARU; September 25, 1955; 0921-1056 GCT; 28°10'N, 167°28'W; 0322 02 236 0332 02x3 26
1 x x 4500-1 26-03 1 x.

0		25.3	35.26	4.79	0.10	0	25.3	35.26	23.47	443	0.000
10	26	25.66	35.26	4.78	0.10	10	25.66	35.26	23.36	453	0.045
25	26	25.71	35.26	4.83	0.10	25	25.71	35.26	23.34	455	0.113
50	26	21.01	34.79	5.75	0.10	50	21.01	34.79	24.35	359	0.215
67	30	19.59	34.76	5.92	0.10	75	18.65	34.72	24.92	305	0.299
87	30	17.49	34.67	6.03	0.30	100	16.60	34.63	25.35	264	0.371
130	30	15.19	34.58	5.23	0.35	150	14.70	34.52	25.69	231	0.493
173	37	14.33	34.47	4.93	0.45	200	13.85	34.43	25.80	221	0.609
260	37	12.91	34.38	4.86	0.60	300	12.35	34.33	26.03	199	0.826
346	37	11.69	34.31	4.94	0.70	400	10.85	34.27	26.26	177	1.022
433	37	10.27	34.22	4.72	1.00	500	8.80	34.09	26.46	158	1.198
520	37	8.40	34.05	3.95	1.50	600	7.00	34.05	26.70	135	1.349
693	37	5.51	34.04	2.14	1.80	700	5.45	34.04	26.88	118	1.480
866	37	4.17	34.20	0.70	2.30	800	4.70	34.24	27.13	95	1.596
1300	37	2.96	34.49	0.86	2.40	1000	3.80	34.42	27.36	73	1.782
						1200	3.25	34.47	27.46	63	1.936

UMITAKA MARU; September 25, 1955; 1728-1854 GCT; 27°10'N, 166°15'W; 1616 01 227 1452 34x3 27
2 43-25 2 4400-1 xx-xx 1 x.

0		25.8	35.44	4.81	0.15	0	25.8	35.44	23.45	445	0.000
10	17	25.98	35.43	4.75	0.10	10	25.98	35.43	23.38	451	0.045
24	17	26.00	35.44	4.75	0.10	25	26.00	35.44	23.39	450	0.113
48	17	25.97	35.43	4.61	0.10	50	25.95	35.43	23.39	450	0.226
67	26	25.60	35.44	4.89	0.10	75	25.15	35.41	23.64	427	0.336
90	26	23.01	35.32	5.20	0.10	100	22.10	35.26	24.42	352	0.434
135	26	18.78	35.05	5.01	0.30	150	18.05	34.96	25.25	273	0.593
184	24	16.99	34.78	4.79	0.20	200	16.40	34.72	25.46	253	0.727
276	24	14.02	34.43	4.35	0.30	300	13.35	34.40	25.87	214	0.968
368	24	11.64	34.27	4.42	0.60	400	11.10	34.24	26.21	182	1.174
460	24	9.69	34.15	3.97	0.70	500	8.80	34.11	26.47	157	1.352
553	24	7.55	34.05	3.04	1.40	600	6.90	34.07	26.73	133	1.506
737	24	4.99	34.13	1.09	2.10	700	5.50	34.11	26.94	113	1.638
921	24	4.15	34.31	0.59	2.30	800	4.70	34.18	27.07	100	1.754
1381	24	2.93	34.49	1.71	1.90	1000	3.95	34.34	27.28	80	1.952
						1200	3.40	34.42	27.40	69	2.120

UMITAKA MARU; September 26, 1955; 0107-0222 GCT; 26°47'N, 165°23'W; 3410 02 246 3632 02x2 28
2 40-20 2 4300-1 27-06 1 x.

0		26.0	35.39	4.77	0.15	0	26.0	35.39	23.35	454	0.000
10	4	26.06	35.37	4.84	0.10	10	26.06	35.37	23.32	457	0.046
25	4	25.83	35.37	4.74	0.10	25	25.83	35.37	23.39	450	0.114
50	4	24.09	35.35	5.20	0.10	50	24.09	35.35	23.90	402	0.221
72	18	21.71	35.30	5.38	0.10	75	21.50	35.30	24.60	335	0.314
95	18	20.04	35.17	5.24	0.15	100	19.70	35.16	24.97	300	0.394
143	18	17.60	34.92	4.80	0.30	150	17.55	34.92	25.34	265	0.537
158	37	17.44	34.92	4.74	0.40	200	16.15	34.69	25.50	249	0.669
236	37	14.59	34.49	4.83	0.45	300	13.05	34.34	25.89	212	0.907
315	37	12.65	34.31	4.21	0.80	400	10.60	34.24	26.27	176	1.109
394	37	10.72	34.24	4.48	0.90	500	8.90	34.13	26.47	157	1.284
473	37	9.32	34.16	4.00	1.40	600	7.10	34.07	26.70	135	1.439
630	37	6.57	34.07	2.69	1.80	700	5.75	34.11	26.90	117	1.574
788	37	4.68	34.15	1.09	1.90	800	4.60	34.16	27.07	100	1.692
1182	37	3.31	34.47	0.98	2.60	1000	3.95	34.33	27.27	81	1.892

OBSERVED						INTERPOLATED			COMPUTED		
Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_{T_3}	ΔD
m	✲°	°C	‰	ml/L	μg at/L	m	°C	‰	g/L	10^{-5} cm/g	dyn. m

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UMITAKA MARU; September 26, 1955; 0907-1042 GCT; 25°53'N, 164°12'W; 1106 02 257 1132 36x2 1 x x 4000-1 xx-xx 1 x.

0		25.8	35.26	4.76	0.10	0	25.8	35.26	23.32	457	0.000
10	6	25.79	35.26	4.82	0.10	10	25.79	35.26	23.32	457	0.046
25	6	25.73	35.26	4.85	0.10	25	25.73	35.26	23.33	456	0.114
50	6	25.16	35.39	4.91	0.10	50	25.16	35.39	23.62	429	0.225
73	12	22.28	35.23	5.21	0.10	75	22.10	35.23	24.39	355	0.324
98	12	20.01	35.16	5.21	0.25	100	19.90	35.14	24.92	305	0.407
147	12	17.91	34.90	5.15	0.30	150	17.80	34.90	25.27	271	0.553
193	15	15.67	34.61	5.18	0.40	200	15.35	34.60	25.61	239	0.684
300	2	12.64	34.31	4.96	0.80	300	12.64	34.31	25.94	208	0.915
400	2	9.94	34.20	4.40	1.00	400	9.94	34.20	26.36	168	1.111
500	2	7.78	33.98	3.71	1.50	500	7.78	33.98	26.53	152	1.279
600	2	5.79	33.98	2.31	2.10	600	5.79	33.98	26.80	126	1.327
800	2	4.39	34.22	0.65	2.90	700	5.05	34.11	26.98	109	1.453
1000	2	3.69	34.36	0.65	3.00	800	4.39	34.22	27.14	94	1.562
1500	2	2.71	34.52	1.42	3.10	1000	3.69	34.36	27.33	76	1.748
						1200	3.30	34.46	27.44	65	1.906
						1500	2.71	34.52	27.54	56	2.122

30

UMITAKA MARU; September 26, 1955; 1707-1844 GCT; 25°09'N, 163°10'W; 1314 25 258 1332 32x2 1 27-10 3 4100-1 30-05 1 x.

0		26.1	35.08	4.72	0.15	0	26.1	35.08	23.08	480	0.000
10	15	26.09	35.08	4.76	0.15	10	26.09	35.08	23.09	479	0.048
24	15	26.11	35.08	4.78	0.20	25	26.10	35.11	23.10	478	0.120
49	15	25.15	35.25	4.89	0.10	50	25.10	35.25	23.54	436	0.233
69	24	24.32	35.25	5.30	0.15	75	24.00	35.25	23.85	407	0.339
91	24	22.17	35.25	5.04	0.10	100	21.55	35.25	24.55	340	0.434
137	24	19.69	35.19	4.66	0.25	150	19.40	35.16	25.05	292	0.594
183	17	18.82	35.05	4.64	0.30	200	18.50	35.07	25.22	276	0.739
274	17	16.73	35.25	4.81	0.30	300	15.15	34.98	25.94	208	0.989
366	17	12.31	34.31	4.32	0.70	400	11.45	34.20	26.10	192	1.198
457	17	10.27	34.13	3.44	1.20	500	9.25	34.15	26.43	161	1.383
549	17	8.13	-	-	-	600	7.30	34.20	26.76	130	1.488
732	17	5.82	-	-	-	700	6.15	34.25	26.97	110	1.601
915	17	4.47	34.36	0.79	2.10	800	5.35	34.31	27.11	97	1.699
1372	17	3.09	34.51	1.16	2.20	1000	4.20	34.38	27.29	80	1.797
						1200	3.60	34.45	27.41	68	1.880

31

UMITAKA MARU; October 4, 1955; missing, missing GCT; 19°36'N, 156°25'W; 0204 02 258 0223 36x1 2 33-10 2 4500-1 18-02 1 x.

0		25.5	34.79	4.78	0.20	0	25.5	34.79	23.05	483	0.000
10	0	25.32	34.79	4.79	0.20	10	25.32	34.79	23.11	477	0.048
25	0	25.23	34.79	4.81	0.10	25	25.23	34.79	23.12	476	0.120
50	0	25.19	34.79	4.77	0.20	50	25.19	34.79	23.15	474	0.239
75	0	23.90	34.87	5.02	0.20	75	23.90	34.87	23.59	431	0.353
99	7	21.91	34.98	5.01	0.20	100	21.90	34.98	24.25	368	0.454
149	7	19.55	34.96	4.54	0.30	150	19.50	34.96	24.99	298	0.623
199	7	17.45	34.67	4.70	0.45						

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ‰°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

UMITAKA MARU; October 5, 1955; 1435-1525 GCT; 18°57'N, 157°14'W; 1316 16 251 1244 14x2 1 x x 3650-1 xx-xx 1 x. 32

0		25.2	34.89	4.78	0.15	0	25.2	34.89	23.22	467	0.000
9	21	25.31	34.89	4.76	0.10	10	25.30	34.89	23.18	471	0.047
23	21	25.29	34.89	4.75	0.15	25	25.25	34.89	23.20	469	0.118
47	21	25.04	34.90	4.77	0.15	50	25.00	34.90	23.29	460	0.234
62	34	24.98	34.90	4.75	0.15	75	24.05	34.94	23.60	430	0.346
83	34	23.28	34.96	4.75	0.15	100	21.85	34.89	24.20	373	0.460
124	34	20.28	34.76	4.73	0.30	150	19.15	34.81	24.85	311	0.633
166	34	18.52	34.85	4.32	0.40						

UMITAKA MARU; October 6, 1955; 1415-1520 GCT; 18°49'N, 157°10'W; 0116 03 228 0244 30x2 1 x x 3000-3 33-06 1 x. 33

0		25.1	34.85	4.68	0.20	0	25.1	34.85	23.22	467	0.000
10	12	25.23	34.83	4.79	0.20	10	25.23	34.83	23.16	472	0.047
24	12	25.15	34.87	4.78	0.15	25	25.20	34.87	23.20	469	0.118
49	12	24.99	34.90	4.73	0.10	50	25.00	34.90	23.29	460	0.234
57	40	24.98	34.90	4.78	0.10	75	22.80	35.03	24.02	448	0.348
77	40	22.67	35.03	5.07	0.10	100	21.45	35.07	24.44	350	0.449
115	40	20.70	35.08	4.74	0.25	150	18.65	34.90	25.05	292	0.612
153	40	18.47	34.89	4.40	0.35						

UMITAKA MARU; October 11, 1955; 0405-0750 GCT; 20°04'N, 178°33'W; 0914 03 268 0932 09x1 1 35-15 2 4500-1 xx-xx 1 x. 34

0		26.8	35.28	4.68	0.15	0	26.8	35.28	23.02	486	0.000
10	6	26.71	35.28	4.62	0.10	10	26.71	35.28	23.05	483	0.049
25	6	26.63	35.28	4.67	0.10	25	26.63	35.28	23.08	480	0.111
48	16	26.62	35.30	4.65	0.15	50	26.45	35.30	23.14	474	0.231
72	16	23.67	35.35	4.91	0.15	75	23.40	35.35	24.10	383	0.341
96	16	21.16	35.28	4.96	0.15	100	20.95	35.26	24.73	323	0.430
135	26	19.39	35.07	4.64	0.30	150	18.85	34.99	25.08	289	0.586
180	26	17.73	34.85	4.86	0.30	200	17.00	34.78	25.36	263	0.727
270	26	14.54	34.52	4.72	0.60	300	12.90	34.38	25.95	207	0.969
324	36	11.63	34.25	4.40	1.00	400	8.45	34.09	26.52	153	1.156
357	37	9.97	34.15	3.98	1.10	500	6.90	34.07	26.73	133	1.306
429	37	7.66	34.07	2.67	1.40	600	6.40	34.13	26.84	122	1.440
572	47	6.60	34.09	1.89	2.20	700	5.55	34.25	27.04	103	1.561
715	47	5.44	34.27	0.98	2.70	800	5.10	34.33	27.15	93	1.668
1072	47	4.11	34.49	1.24	3.00	1000	4.40	34.45	27.33	76	1.856
1429	47	3.25	34.52	1.45	2.80	1200	3.70	34.51	27.45	64	2.018
1786	47	2.64	34.56	1.79	2.20	1500	3.15	34.52	27.52	58	2.237

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m
35	UMITAKA MARU; October 11, 1955; 1705-1835 GCT; 20°01'N, 179°12'E; 0905 03 267 1232 09x1 1 x x 3500-1 xx-xx 1 x.										
0		26.8	34.74	4.60	0.10	0	26.8	34.74	22.61	525	0.000
10	18	26.89	34.74	4.67	0.30	10	26.89	34.74	22.58	528	0.053
24	18	26.93	34.74	4.64	0.15	25	26.95	34.74	22.57	529	0.132
48	18	26.93	34.74	4.57	0.15	50	26.80	34.74	22.61	525	0.264
65	30	25.72	34.79	4.86	0.20	75	25.30	34.94	23.23	466	0.389
87	30	24.84	35.05	4.86	0.20	100	24.20	35.12	23.69	422	0.501
130	30	22.86	35.25	4.49	0.30	150	22.05	35.25	24.42	352	0.697
174	35	21.15	35.23	4.36	0.30	200	19.95	35.14	24.90	307	0.865
260	35	17.02	34.78	4.46	0.30	300	17.00	34.78	25.37	262	1.158
347	35	17.00	34.78	4.45	0.35	400	15.00	34.87	25.90	211	1.405
434	35	-	34.92	4.49	0.15	500	11.15	34.49	26.37	167	1.606
521	35	10.35	34.34	4.13	0.70	600	8.30	34.20	26.62	143	1.772
694	35	5.95	34.09	2.45	1.30	700	5.90	34.09	26.87	119	1.913
868	35	4.96	34.29	1.03	2.00	800	5.35	34.22	27.04	103	2.033
1361	35	3.33	34.52	1.48	2.00	1000	4.55	34.34	27.22	86	2.241
						1200	3.90	34.45	27.38	71	2.317
36	UMITAKA MARU; October 12, 1955; 0228-0433 GCT; 19°57'N, 177°20'E; 0911 03 276 1032 09x1 2 35-11 2 1850-3 30-04 1 x.										
0		27.3	34.83	4.65	0.20	0	27.3	34.83	22.52	534	0.000
10	8	27.19	34.87	4.59	0.20	10	27.19	34.87	22.60	526	0.053
25	8	27.05	34.83	4.64	0.20	25	27.05	34.83	22.60	526	0.132
50	8	27.03	34.85	4.58	0.20	50	27.03	34.85	22.62	524	0.264
69	22	27.05	34.85	4.67	0.20	75	26.35	34.90	22.88	499	0.392
93	22	24.70	35.05	4.96	0.20	100	24.30	35.08	23.64	427	0.509
139	22	22.38	35.23	4.61	0.20	150	22.00	35.23	24.42	352	0.707
193	11	20.48	35.12	4.32	0.40	200	20.25	35.08	24.78	318	0.878
289	11	14.95	34.49	4.09	0.60	300	14.40	34.45	25.70	230	1.160
385	11	10.58	34.22	3.51	1.00	400	10.05	34.22	26.35	169	1.368
482	11	7.69	34.22	2.58	2.00	500	7.35	34.22	26.77	129	1.526
578	11	6.50	34.20	1.45	2.40	600	6.35	34.22	26.91	116	1.656
771	11	5.19	34.38	1.09	3.00	700	5.70	34.31	27.06	101	1.773
964	11	4.46	34.47	1.26	3.00	800	5.10	34.40	27.21	87	1.876
1454	11	3.10	34.56	1.68	2.30	1000	4.35	34.47	27.34	75	2.056
						1200	3.80	34.51	27.44	65	2.218
37	UMITAKA MARU; October 12, 1955; 1013-1136 GCT; 20°01'N, 176°18'E; 0713 03 252 1132 12x2 1 x x 3000-3 xx-xx 1 x.										
0		27.1	34.87	4.63	0.20	0	27.1	34.87	22.61	525	0.000
10	16	27.10	34.87	4.63	0.20	10	27.10	34.87	22.61	525	0.053
24	16	27.09	34.85	4.63	0.20	25	27.10	34.85	22.60	526	0.184
48	16	27.05	34.85	4.45	0.30	50	27.05	34.90	22.66	520	0.316
62	34	27.04	35.03	4.58	0.20	75	27.10	35.03	22.74	513	0.447
83	34	27.09	35.03	4.64	0.20	100	25.10	35.10	23.41	449	0.568
124	53	23.43	35.23	4.73	0.40	150	22.15	35.23	24.37	362	0.774
125	34	23.36	35.23	4.54	0.20	200	19.60	35.16	25.00	297	0.942
187	53	20.48	35.23	4.15	0.40	300	13.65	34.38	25.80	221	1.209
250	53	16.22	34.69	3.91	0.50	400	9.85	34.31	26.45	159	1.407
312	53	13.12	34.34	3.91	1.05	500	7.78	34.22	26.71	135	1.562
375	53	10.66	34.33	3.93	1.00	600	6.50	34.18	26.87	119	1.698
500	53	7.78	34.22	2.79	1.20	700	5.75	34.24	27.00	107	1.820
625	53	6.13	34.18	1.38	2.00	800	5.25	34.31	27.12	97	1.931
1005	53	4.18	34.47	3.04	1.30	1000	4.20	34.47	27.37	72	2.119

OBSERVED						INTERPOLATED			COMPUTED			
Z m	W ⊀°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm^3/g	ΔD dyn. m	

UMITAKA MARU; October 12, 1955; 1813-1938 GCT; 20°02'N, 174°50'E; 0719 01 270 1132 xxx3 2 38-15 2 2000-1 x 1 x. 38

0		27.3	34.96	4.63	0.10	0	27.3	34.96	22.62	524	0.000	
10	17	27.45	34.96	4.53	0.10	10	27.45	34.96	22.56	530	0.053	
24	17	27.43	34.96	4.58	0.15	25	27.45	34.96	22.56	530	0.132	
48	17	27.48	34.90	4.53	0.15	50	27.45	34.90	22.54	532	0.266	
62	35	27.42	34.96	4.61	0.15	75	26.45	35.17	23.04	484	0.394	
82	35	25.93	35.26	4.89	0.10	100	24.80	35.32	23.67	424	0.508	
123	35	23.48	35.35	4.73	0.60	150	21.95	35.44	24.59	336	0.701	
144	45	22.39	35.46	4.75	0.15	200	20.45	35.21	24.82	314	0.867	
216	45	20.17	35.12	4.73	0.10							

UMITAKA MARU; October 12, 1955; 2129-2206 GCT; 20°02'N, 174°45'E; 0719 03 275 1132 xxx3 2 x xx-xx 1 x. 39

0		27.5	35.01	4.58	0.15	0	27.5	35.01	22.50	536	0.000	
25	42	27.39	35.01	4.45	-	10	27.45	35.01	22.62	524	0.053	
37	42	27.41	34.98	4.59	0.20	25	27.39	35.01	22.64	522	0.132	
74	42	25.68	35.19	4.84	0.15	50	26.80	35.08	22.88	499	0.247	
153	42	21.75	35.28	4.49	-	75	25.65	35.19	23.30	459	0.355	
230	40	18.22	35.08	4.31	0.15	100	24.35	35.25	23.74	417	0.465	
306	40	14.40	34.49	4.49	-	150	21.95	35.28	24.47	348	0.659	
383	40	11.21	34.31	4.39	0.15	200	19.65	35.19	25.02	295	0.823	
460	40	8.63	34.09	3.04	0.45	300	14.75	34.52	25.68	232	1.095	
						400	10.65	34.27	26.29	174	1.307	

UMITAKA MARU; October 13, 1955; 0229-0402 GCT; 20°03'N, 173°31'E; 1117 02 284 1132 12x3 2 35-30 2 3000-1 31-02 1 x. 40

0		27.6	35.10	4.55	0.15	0	27.6	35.10	22.62	524	0.000	
10	17	27.54	35.10	4.62	0.15	10	27.54	35.10	22.64	522	0.052	
24	17	27.46	35.12	4.54	0.15	25	27.45	35.12	22.69	517	0.130	
48	17	27.34	35.34	4.62	0.15	50	27.10	35.35	22.98	490	0.257	
59	37	25.89	35.41	4.91	0.20	75	24.40	35.39	23.84	408	0.371	
79	37	23.96	35.39	5.03	0.15	100	22.80	35.35	24.27	367	0.469	
119	37	22.02	35.30	4.53	0.20	150	21.20	35.25	24.65	330	0.646	
136	47	21.89	35.28	4.53	0.20	200	19.05	35.03	25.05	292	0.805	
205	47	18.85	34.99	4.35	0.45	300	14.25	34.54	25.80	221	1.069	
259	59	15.63	34.65	4.54	0.60	400	10.80	34.33	26.33	171	1.273	
273	47	14.92	34.58	4.64	0.65	500	7.90	34.18	26.66	139	1.436	
311	59	13.88	34.52	4.31	0.70	600	6.70	34.24	26.88	118	1.573	
415	59	10.34	34.29	3.92	1.10	700	5.80	34.34	27.07	100	1.692	
519	59	7.44	34.16	2.64	1.70	800	4.90	34.43	27.25	83	1.793	
815	59	4.79	34.45	1.22	2.50							

41 UMITAKA MARU; October 13, 1955; 1029-1204 GCT; 20°02'N, 172°10'E; 0714 03 278 0832 06x3 1 x x 1600-3 xx-xx 1 x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.4	35.43	4.60	0.10	0	27.4	35.43	22.94	493	0.000
10	11	27.40	35.30	5.02	0.10	10	27.40	35.30	22.85	502	0.050
25	11	27.40	35.43	4.51	0.10	25	27.40	35.43	22.94	493	0.125
49	11	25.30	35.46	5.08	0.10	50	25.50	35.48	23.57	433	0.241
69	24	23.33	35.66	5.02	0.10	75	23.15	35.61	24.37	357	0.340
91	24	22.44	35.43	4.87	0.15	100	22.10	35.43	24.54	341	0.429
137	24	20.53	35.50	4.61	0.25	150	20.40	35.34	24.93	304	0.592
146	36	20.58	35.34	4.43	0.25	200	18.05	34.98	25.26	272	0.739
218	36	17.32	34.89	4.47	0.40	300	17.10	34.94	25.46	253	1.009
364	36	16.88	34.99	4.54	0.50	400	16.05	34.83	25.64	236	1.464
437	36	15.10	34.61	4.46	0.70	500	12.95	34.52	26.05	197	1.693
582	36	10.18	34.42	3.86	1.20	600	9.90	34.40	26.52	153	1.880
728	36	7.60	34.29	2.78	1.80	700	8.10	34.31	26.74	132	2.035
1092	36	4.68	34.51	1.29	2.50	800	7.05	34.33	26.90	117	2.172
						1000	5.40	34.45	27.21	87	2.286

42 UMITAKA MARU; October 13, 1955; 1829-2034 GCT; 20°01'N, 170°50'E; 1012 63 259 0932 09x1 1 28-10 2 4000-1 xx-xx 1 x.

0		27.6	34.96	4.53	0.25	0	27.6	34.96	22.52	.534	0.000
10	12	27.72	35.08	4.53	0.20	10	27.72	35.08	22.56	530	0.053
24	12	27.74	35.14	4.50	0.15	25	27.70	35.19	22.66	520	0.132
49	12	27.44	35.52	4.63	0.10	50	27.40	35.52	23.00	488	0.258
74	10	26.91	35.46	4.77	0.10	75	26.85	35.46	23.27	462	0.378
99	10	24.36	35.39	5.02	0.10	100	24.30	35.39	23.86	406	0.487
148	10	21.99	35.48	4.72	0.20	150	21.90	35.48	24.82	314	0.670
196	5	19.70	35.14	4.27	0.35	200	19.60	35.12	24.97	300	0.827
294	5	15.05	34.65	4.48	0.65	300	14.80	34.63	25.76	225	1.098
392	5	10.78	34.42	3.53	1.00	400	10.60	34.38	26.38	166	1.302
490	5	8.16	34.18	2.71	1.60	500	8.00	34.18	26.55	150	1.818
588	5	6.53	34.31	1.62	2.40	600	6.45	34.31	26.96	111	2.056
784	5	5.09	34.42	1.10	2.60	700	5.70	34.36	27.11	97	2.168
980	5	4.32	34.52	1.38	2.60	800	5.05	34.43	27.24	84	2.268
1471	5	3.00	34.58	1.72	2.60	1000	4.30	34.52	27.39	70	2.442
						1200	3.75	34.56	27.48	62	2.596

43 UMITAKA MARU; October 14, 1955; 0245-0430 GCT; 20°00'N, 169°00'E; 2707 62 257 2732 09x1 1 26-6 2 4500-1 35-12 1 x.

0		27.5	34.98	4.56	0.15	0	27.5	34.98	22.56	530	0.000
10	2	27.70	34.98	4.53	0.15	10	27.70	34.98	22.51	535	0.053
25	2	27.74	35.07	4.58	0.10	25	27.74	35.07	22.55	531	0.135
50	2	27.73	35.07	4.54	0.10	50	27.73	35.07	22.56	530	0.268
73	13	27.73	35.25	4.50	0.15	75	27.65	35.23	22.70	516	0.399
98	13	26.14	35.16	4.95	0.15	100	26.05	35.16	23.16	472	0.524
147	13	23.13	35.53	4.65	0.15	150	23.00	35.53	24.35	359	0.734
196	12	20.73	35.34	4.27	0.30	200	20.55	35.32	24.88	308	0.899
293	12	14.51	34.49	4.05	0.90	300	14.20	34.45	25.74	227	1.174
385	8	10.48	34.18	3.57	1.40	400	10.15	34.22	26.34	170	1.381
481	8	8.50	34.22	2.24	2.10	500	8.05	34.20	26.65	140	1.544
578	8	6.45	34.15	1.67	2.80	600	6.30	34.16	26.87	119	1.681
963	8	4.31	34.45	1.42	3.00	700	5.80	34.24	27.00	107	1.802
1460	8	3.05	34.51	1.72	2.80	800	5.20	34.33	27.14	94	1.912
						1000	4.25	34.45	27.34	84	2.010
						1200	3.75	34.47	27.41	68	2.096

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϕ°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

UMITAKA MARU; October 14, 1955; 1045-1200 GCT; 20°03'N, 167°44'E; 1115 62 265 0632 04x1 1 x x 5000-1 xx-xx 1 x. 44

0		27.6	34.83	4.58	0.15	0	27.6	34.83	22.42	543	0.000
10	15	27.70	34.89	4.57	0.15	10	27.70	34.89	22.43	542	0.054
24	15	27.73	34.89	4.55	0.15	25	27.75	34.89	22.41	544	0.136
49	15	27.78	34.96	4.50	0.10	50	27.80	34.96	22.45	540	0.272
69	26	27.80	34.96	4.54	0.15	75	27.80	34.96	22.45	540	0.408
90	26	27.81	34.96	4.56	0.10	100	27.05	35.03	22.76	511	0.540
133	49	24.48	35.19	4.72	0.20	150	22.65	35.10	24.12	381	0.765
135	26	24.40	35.21	4.72	0.15	200	16.81	34.45	25.16	282	0.934
200	49	16.81	34.45	3.02	0.90	300	11.20	34.18	26.13	190	1.177
267	49	12.31	34.25	3.22	1.10	400	8.85	34.15	26.49	155	1.357
334	49	10.07	34.16	3.06	1.20	500	7.05	34.16	26.78	128	1.506
401	49	8.83	34.15	2.48	1.50	600	5.90	34.22	26.97	110	1.632
534	49	6.39	34.16	1.64	2.00	700	5.30	34.29	27.10	98	1.744
668	49	5.40	34.27	1.03	2.10	800	4.85	34.34	27.19	92	1.848
1062	49	3.76	34.49	-	-	1000	4.00	34.45	27.36	73	2.022

UMITAKA MARU; October 14, 1955; 1845-2100 GCT; 20°04'N, 166°22'E; 0515 21 258 0632 04x1 1 43-10 2 5500-1 xx-xx 1 x. 45

0		27.4	34.83	4.58	0.60	0	27.4	34.83	22.48	537	0.000
10	13	27.51	34.89	4.57	0.25	10	27.51	34.89	22.49	537	0.054
24	13	27.53	34.89	4.60	0.30	25	27.55	34.89	22.48	537	0.134
49	13	27.54	34.89	4.56	0.20	50	27.45	34.89	22.51	535	0.269
69	22	26.06	34.89	4.91	0.15	75	25.75	34.98	23.12	476	0.387
93	22	25.01	35.14	4.78	0.15	100	24.70	35.14	23.55	435	0.506
139	22	22.52	35.14	4.29	0.35	150	21.95	35.12	24.35	359	0.707
188	22	20.08	35.08	4.28	0.20	200	19.60	35.05	24.92	305	0.876
282	21	16.08	34.56	4.03	0.60	300	15.45	34.51	25.52	248	1.161
376	21	12.67	34.29	4.24	1.00	400	11.85	34.24	26.05	197	1.392
470	21	9.35	34.09	3.92	1.40	500	8.20	34.07	26.54	151	1.575
502	34	8.24	34.07	3.33	1.30	600	6.70	34.13	26.79	127	1.723
669	34	5.64	34.18	1.23	2.20	700	5.45	34.22	27.03	104	1.848
836	34	4.57	34.34	1.01	2.20	800	4.85	34.31	27.16	92	1.955
1287	34	3.33	34.51	1.69	1.70	1000	4.15	34.40	27.31	78	2.049
						1200	3.60	34.47	27.43	66	2.131

UMITAKA MARU; October 15, 1955; 0408-0602 GCT; 20°05'N, 164°39'E; 0105 01 276 0932 02x1 2 38-11 2 5500-1 29-05 1 x. 46

0		28.2	34.96	4.54	0.10	0	28.2	34.96	22.33	552	0.000
10	12	27.97	34.96	4.53	0.10	10	27.97	34.96	22.39	546	0.055
24	12	27.89	34.96	4.61	0.10	25	27.85	34.99	22.46	539	0.136
49	12	27.78	35.17	4.55	0.05	50	27.70	35.17	22.65	521	0.269
74	10	25.53	35.32	5.12	0.00	75	25.45	35.32	23.46	444	0.391
98	10	23.74	35.35	4.94	0.05	100	23.65	35.35	24.04	388	0.496
148	10	21.42	35.21	4.50	0.20	150	21.30	35.21	24.56	339	0.680
197	10	18.62	34.94	4.17	0.05	200	18.50	34.92	25.11	287	0.840
279	21	14.53	34.45	4.33	0.70	300	13.80	34.42	25.80	221	1.102
372	21	11.25	34.25	3.88	1.10	400	10.35	34.20	26.29	174	1.308
465	21	8.60	34.07	3.47	1.70	500	7.95	34.11	26.60	145	1.476
557	21	7.11	34.16	1.72	1.80	600	6.70	34.20	26.85	121	1.618
743	21	5.11	34.29	1.20	2.10	700	5.60	34.25	27.03	104	1.740
929	21	4.44	34.45	1.44	-	800	4.90	34.34	27.18	90	1.846
1415	21	2.94	34.52	2.01	2.00	1000	4.25	34.47	27.36	73	2.028
						1200	3.65	34.49	27.44	65	2.186

47

UMITAKA MARU; October 15, 1955; 1205-1330 GCT; 20°03'N, 163°28'E; 0105 01 272 0932 xxx2 1 x x 3500-1 xx-xx 1 x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ≮°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0		27.9	34.99	4.52	0.15	0	27.9	34.99	22.45	540	0.000
10	8	27.81	35.01	4.49	0.15	10	27.81	35.01	22.49	537	0.054
25	8	27.90	35.01	4.52	0.15	25	27.90	35.01	22.46	539	0.135
50	8	26.93	35.30	4.86	0.15	50	26.93	35.30	23.00	488	0.261
73	13	25.36	35.52	5.08	0.15	75	25.25	35.53	23.69	422	0.376
98	13	23.44	35.63	4.83	0.10	100	23.35	35.63	24.32	362	0.475
148	13	20.58	35.63	4.29	0.20	150	20.50	35.63	25.12	286	0.639
195	13	19.05	35.66	4.71	0.30	200	18.80	35.61	25.56	244	0.775
272	26	15.06	34.60	4.52	1.00	300	14.00	34.47	25.79	222	1.016
363	26	11.86	34.34	4.28	1.00	400	10.90	34.42	26.36	168	1.219
453	26	9.47	34.51	3.93	1.30	500	8.40	34.54	26.87	119	1.371
544	26	7.41	34.58	2.58	1.80	600	6.70	34.60	27.16	92	1.486
725	26	5.15	34.61	1.12	2.60	700	5.50	34.61	27.33	76	1.580
907	26	4.41	34.74	1.31	2.60	800	4.90	34.67	27.44	65	1.661
1390	26	2.97	-	1.73	2.20	1000	4.15	(34.83)	27.66	45	1.726
						1200	3.55				

48

UMITAKA MARU; October 16, 1955; 0148-0248 GCT; 20°20'N, 163°03'E; 0903 02 291 1031 09x2 2 50-12 1 1310-3 29-05 1 x.

0		28.5	35.05	4.58	0.15	0	28.5	35.05	22.29	556	0.000
10	6	27.95	35.23	4.56	0.10	10	27.95	35.23	22.60	526	0.053
25	6	27.91	35.34	4.52	0.10	25	27.91	35.34	22.70	516	0.131
50	6	27.10	35.30	4.80	0.25	50	27.10	35.30	22.94	493	0.258
73	13	25.81	35.37	5.11	0.20	75	25.65	35.37	23.45	445	0.376
98	13	23.95	35.44	4.95	0.10	100	23.80	35.44	24.05	388	0.481
147	13	20.80	35.55	4.42	0.20	150	20.65	35.53	25.01	296	0.654
195	13	18.72	35.16	4.28	0.45	200	18.50	35.14	25.27	271	0.799
279	22	15.04	34.79	4.13	0.50	300	14.20	34.76	25.98	204	1.039
372	22	11.67	34.70	3.98	0.95	400	10.90	34.63	26.52	153	1.226
466	22	9.14	-	-	-	500	8.35	34.45	26.71	135	1.379
559	22	6.98	34.42	2.17	1.90	600	6.60	34.45	27.07	100	1.505
745	22	5.08	34.61	0.98	2.00	700	5.55	34.56	27.27	81	2.505
931	22	4.29	34.78	1.50	1.90	800	4.85	34.67	27.53	57	2.684

49

UMITAKA MARU; October 16, 1955; 1113-1438 GCT; 20°00'N, 161°40'E; 0512 01 273 1632 04x2 1 x x 2250-3 xx-xx 1 x.

0		28.2	34.78	4.50	0.15	0	28.2	34.78	22.19	565	0.000
10	15	28.20	35.01	4.48	0.15	10	28.20	35.01	22.36	549	0.056
24	15	28.13	34.98	4.52	0.15	25	28.20	34.98	22.34	551	0.140
48	15	28.26	34.92	4.50	0.10	50	28.20	34.94	22.30	555	0.278
72	15	27.80	35.16	4.72	0.15	75	27.35	35.17	22.76	511	0.412
98	11	25.29	35.28	4.74	0.20	100	25.20	35.30	23.51	439	0.532
147	11	22.92	35.57	4.48	0.10	150	22.70	35.57	24.46	348	0.732
196	11	19.89	35.30	4.37	0.40	200	19.70	35.28	25.06	291	0.895
293	11	14.91	34.83	4.51	0.65	300	14.75	34.81	25.91	211	1.154
372	26	12.80	34.70	4.38	0.95	400	11.85	34.65	26.37	167	1.353
465	26	9.70	34.52	3.28	1.20	500	8.90	34.49	26.75	131	1.512
558	26	7.51	34.45	2.15	1.60	600	6.95	34.47	27.03	104	1.639
744	26	5.10	34.51	1.19	2.00	700	5.60	34.49	27.22	86	1.743

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ↗°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

UMITAKA MARU; October 16, 1955; 1918-2200 GCT; 20°00'N, 160°38'E; 0910 01 279 0631 14x1 2 34-10 2 x xx-xx 1 x. 50

0		28.4	35.17	4.49	0.10	0	28.4	35.17	22.42	543	0.000
10	5	28.41	35.17	4.45	0.10	10	28.41	35.17	22.41	544	0.054
25	5	28.38	35.03	4.49	0.10	25	28.38	35.03	22.31	554	0.137
50	5	27.60	35.37	4.76	0.20	50	27.60	35.37	22.84	503	0.269
73	13	25.86	35.21	4.76	0.15	75	25.75	35.21	23.29	460	0.390
98	13	24.53	35.26	4.61	0.10	100	24.45	35.26	23.73	418	0.499
147	13	22.65	35.30	4.32	0.15	150	22.55	35.34	24.32	362	0.696
182	25	21.22	35.50	4.34	0.30	200	20.00	35.46	25.13	285	0.861
272	25	15.90	35.72	4.55	0.40	300	14.80	34.70	25.82	219	1.121
376	20	12.11	34.63	4.36	0.80	400	11.25	34.60	26.44	160	1.320
470	20	8.75	34.49	3.52	1.30	500	8.30	34.45	26.83	123	1.470
549	29	7.60	34.40	2.87	1.60	600	6.80	34.43	27.02	105	1.593
732	29	5.18	34.54	1.25	2.10	700	5.50	34.52	27.25	83	1.696
915	29	4.55	-	-	-	800	4.95	34.58	27.39	70	1.783
1272	29	2.96	34.85	2.00	2.20	1000	4.20	34.70	27.55	55	1.939
						1200	3.25	34.81	27.74	37	2.051

UMITAKA MARU; October 17, 1955; 0325-0523 GCT; 19°58'N, 159°26'E; 0808 01 284 0731 22x1 2 42-14 1 5000-1 26-03 1 x. 51

0		28.4	35.14	4.51	0.00	0	28.4	35.14	22.38	547	0.000
10	5	28.20	35.21	4.54	0.00	10	28.20	35.21	22.52	534	0.054
25	5	28.03	35.21	4.49	0.05	25	28.03	35.21	22.57	529	0.134
50	5	27.39	35.25	4.80	0.05	50	27.39	35.25	22.81	506	0.264
69	22	25.05	35.73	4.94	0.00	75	24.85	35.70	23.93	399	0.378
93	22	23.97	35.61	4.76	0.10	100	23.60	35.59	24.22	371	0.476
139	22	21.73	35.53	4.40	0.15	150	21.35	35.52	24.81	315	0.650
195	24	19.89	35.34	3.97	0.25	200	19.65	35.32	25.12	286	0.803
278	22	15.62	34.92	4.49	0.60	300	15.10	34.81	25.84	217	1.063
389	24	12.98	34.40	4.11	0.80	400	12.75	34.40	25.99	203	1.283
487	24	10.12	34.49	3.99	1.20	500	9.80	34.49	26.60	145	1.467
584	24	7.86	34.42	3.00	1.20	600	7.60	34.43	26.91	116	1.608
779	24	5.33	34.61	1.34	2.00	700	6.15	34.52	27.18	90	1.721
974	24	4.50	34.69	1.14	2.40	800	5.25	34.61	27.36	73	1.813
1460	24	2.92	34.63	1.60	2.70	1000	4.40	34.69	27.52	58	1.965
						1200	3.90	34.65	27.54	56	2.101

UMITAKA MARU; October 17, 1955; 1125-1244 GCT; 19°57'N, 158°24'E; 0207 18 281 0731 22x1 1 x x 4300-1 xx-xx 1 x. 52

0		28.6	34.89	4.47	0.15	0	28.6	34.89	22.14	570	0.000
10	18	28.56	35.08	4.37	0.10	10	28.56	35.08	22.30	555	0.056
24	18	28.68	34.83	4.47	0.10	25	28.65	34.83	22.08	576	0.141
48	18	28.52	34.92	4.43	0.10	50	28.50	34.96	22.22	562	0.284
73	13	27.94	35.14	4.86	0.05	75	27.70	35.16	22.62	524	0.421
98	13	25.60	-	4.79	0.10	100	25.50	35.35	22.97	491	0.548
147	13	23.24	35.64	4.40	0.20	150	23.10	35.64	24.43	351	0.761
191	13	20.58	35.44	4.18	0.35	200	20.20	35.41	25.04	293	0.926
287	13	16.40	34.98	4.32	0.50	300	15.85	34.90	25.75	226	1.194
382	13	12.80	34.51	3.90	1.00	400	12.10	34.45	26.17	186	1.410
478	13	9.36	34.27	3.09	1.20	500	8.90	34.29	26.60	145	1.585
574	13	7.44	34.42	2.53	1.30	600	7.15	34.42	26.96	111	1.722
765	13	5.08	34.40	1.35	2.20	700	5.90	34.40	27.12	96	1.835
956	13	4.32	34.70	1.29	2.20	800	5.05	34.45	27.25	83	1.934
1434	13	2.91	34.60	1.69	2.10	1000	4.20	34.69	27.53	57	2.094
						1200	3.60	34.65	27.57	44	2.228

TUF

NORPAC

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ×°	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	Z m	T °C	S ‰	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
53	UMITAKA MARU; October 17, 1955; 1925-2047 GCT; 19°50'N, 157°00'E; 0310 03 276 0332 22x1 2 35-9 2 4300-1 xx-xx 1 x.										
0		28.3	35.26	4.50	0.20	0	28.3	35.26	22.52	534	0.000
10	7	28.29	35.21	4.45	0.10	10	28.29	35.21	22.49	537	0.054
25	7	28.30	35.43	4.50	0.10	25	28.30	35.43	22.63	523	0.133
50	7	27.39	35.66	4.84	0.10	50	27.39	35.66	23.11	477	0.259
72	18	25.35	35.52	4.87	0.10	75	25.20	35.55	23.72	419	0.327
95	18	23.90	35.73	4.72	0.20	100	23.45	35.73	24.38	318	0.445
143	18	20.37	35.73	4.34	0.35	150	20.15	35.39	25.03	294	0.610
153	39	20.02	35.23	4.10	0.35	200	17.90	35.08	25.38	261	0.754
229	39	16.76	35.00	4.29	0.40	300	15.10	34.83	25.85	216	1.005
305	39	14.92	34.81	4.30	0.60	400	12.00	34.58	26.29	174	1.215
382	39	12.45	34.63	4.21	1.00	500	9.30	34.31	26.54	151	1.387
458	39	10.40	34.40	3.75	1.00	600	7.15	34.22	26.81	125	1.534
611	39	6.91	34.22	2.03	1.80	700	5.95	34.43	27.13	95	1.653
763	39	5.30	34.60	1.15	2.70	800	5.15	34.60	27.35	74	1.747
1145	39	3.52	34.54	1.53	2.70	1000	4.20	34.56	27.43	66	1.907
54	UMITAKA MARU; October 18, 1955; 0341-0456 GCT; 19°47'N, 155°25'E; 0310 03 285 0332 04x1 2 23-5 2 3000-3 24-08 1 x.										
0		28.7	34.79	4.45	0.10	0	28.7	34.79	22.04	579	0.000
10	4	28.58	34.79	4.46	0.10	10	28.58	34.79	22.07	577	0.058
25	4	28.39	34.79	4.47	0.10	25	28.39	34.79	22.14	570	0.144
50	4	27.87	35.05	4.65	0.10	50	27.87	35.05	22.49	537	0.283
75	6	25.93	35.32	4.92	0.20	75	25.93	35.32	23.32	457	0.408
99	6	24.66	35.35	4.74	0.20	100	24.50	35.35	23.78	413	0.518
149	6	21.73	35.17	4.05	0.35	150	21.70	35.17	24.45	349	0.711
221	6	21.41	35.28	4.24	0.25	200	21.50	35.26	24.57	338	0.886
295	6	17.41	34.94	4.23	0.40	300	17.25	34.92	25.42	257	1.192
369	6	14.94	34.61	4.46	0.65	400	13.85	34.51	25.86	215	1.438
443	6	12.23	34.34	3.36	0.00	500	10.45	34.27	26.33	171	1.642
590	6	7.69	34.15	3.19	1.50	600	7.55	34.15	26.68	137	1.806
738	6	5.42	34.20	1.62	2.70	700	6.05	34.18	26.93	114	1.942
1106	6	3.93	34.47	1.44	2.90	800	5.25	34.24	27.06	101	2.059
						1000	4.40	34.40	27.28	80	2.159
55	UMITAKA MARU; October 18, 1955; 1141-1254 GCT; 19°55'N, 153°23'E; 0514 02 279 0531 04x1 1 x x 5000-1 xx-xx 1 x.										
0		28.1	35.03	4.52	0.30	0	28.1	35.03	22.41	544	0.000
10	11	28.07	35.03	4.50	0.10	10	28.07	35.03	22.42	543	0.054
24	11	28.00	35.03	4.56	0.05	25	28.00	35.03	22.43	542	0.136
49	11	27.89	35.07	4.52	0.10	50	27.80	35.09	22.54	532	0.271
72	18	26.52	35.30	5.01	0.10	75	26.30	35.30	23.18	471	0.397
95	18	24.52	35.32	4.83	0.10	100	24.20	35.30	23.83	408	0.508
143	18	22.07	35.21	4.42	0.30	150	21.95	35.19	24.41	353	0.701
163	37	21.46	35.17	4.21	0.30	200	19.00	34.98	25.02	295	0.866
245	37	16.42	34.67	4.58	0.40	300	15.50	34.58	25.55	245	1.147
327	37	15.02	34.54	4.43	0.70	400	12.35	34.34	26.03	199	1.331
409	37	12.08	34.33	4.37	1.10	500	9.20	34.16	26.46	158	1.469
490	37	9.49	34.16	3.77	1.50	600	6.90	34.16	26.80	126	1.620
654	37	5.98	34.16	1.98	2.30	700	5.65	34.22	27.00	107	1.746
817	37	4.74	34.33	1.55	2.80	800	4.90	34.31	27.15	93	1.855
1226	37	3.24	34.52	1.69	2.80	1000	4.10	34.42	27.33	76	2.043
						1200	3.35	34.51	27.47	62	2.199

OBSERVED					
Z	W	T	S	O_2	PO_4-P
m	σ_t	°C	‰	ml/L	µg at/L

INTERPOLATED			COMPUTED		
Z	T	S	σ_t	δ_{T_3}	ΔD
m	°C	‰	g/L	10^{-5} cm^3/g	dyn. m

UMITAKA MARU; October 18, 1955; 1941-2056 GCT; 20°00'N, 151°53'E; 0308 01 276 0331 02x1 2 25-5 2 5500-1 xx-xx 1 x. 56

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_{T_3}	ΔD
0		28.1	34.79	4.54	0.05	0	28.1	34.79	22.22	562	0.000
10	5	28.06	34.78	4.51	0.05	10	28.06	34.78	22.23	561	0.056
25	5	28.10	34.78	4.54	0.20	25	28.10	34.78	22.22	562	0.141
50	5	26.82	35.23	4.97	0.10	50	26.82	35.23	22.97	491	0.273
75	5	25.34	35.32	5.04	0.10	75	25.34	35.32	23.50	440	0.390
99	5	24.47	35.34	4.86	0.10	100	24.40	35.34	23.79	412	0.497
149	5	21.41	35.19	4.37	0.20	150	21.35	35.17	24.54	341	0.688
197	11	18.47	34.89	4.50	0.40	200	18.40	34.89	25.11	287	0.848
288	16	15.72	34.63	4.56	0.50	300	15.40	34.60	25.60	240	1.119
383	16	12.86	34.38	4.27	0.85	400	12.40	34.34	26.02	200	1.348
479	16	-	34.18	3.80	1.40	500	9.65	34.16	26.37	167	1.541
575	16	7.54	34.13	2.59	1.70	600	7.25	34.15	26.73	133	1.701
767	16	5.11	34.27	1.22	2.70	700	6.00	34.22	26.96	111	1.832
959	16	4.15	34.45	1.76	2.80	800	4.95	34.31	27.15	93	1.943
1438	16	2.80	34.56	1.85	2.80	1000	4.05	34.45	27.37	72	2.127
						1200	3.45	34.51	27.47	62	2.279

UMITAKA MARU; October 19, 1955; 0405-0625 GCT; 20°03'N, 150°15'E; 0906 03 287 1031 09x1 2 35-4 2 3000-3 26-06 1 x. 57

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_{T_3}	ΔD
0		28.9	34.67	4.54	0.10	0	28.9	34.67	21.88	595	0.000
10	8	28.49	34.61	4.49	0.10	10	28.49	34.61	21.97	586	0.059
25	8	28.49	34.63	4.53	0.10	25	28.49	34.63	21.99	584	0.147
50	8	28.47	34.67	4.51	0.10	50	28.47	34.67	22.02	581	0.293
75	5	26.47	35.08	5.03	0.10	75	26.47	35.08	22.97	491	0.428
100	5	25.09	35.10	4.69	0.10	100	25.09	35.10	23.42	448	0.546
150	5	22.40	35.23	4.42	0.05	150	22.40	35.23	24.26	367	0.753
199	6	20.15	35.07	4.28	0.60	200	20.10	35.07	24.80	316	0.927
298	6	15.63	34.61	4.62	0.50	300	15.60	34.61	25.56	244	1.215
398	6	12.26	34.34	4.35	1.10	400	12.20	34.34	26.06	196	1.444
486	7	9.78	34.20	3.84	1.60	500	9.40	34.18	26.43	161	1.632
583	7	7.10	34.13	2.49	2.40	600	6.95	34.15	26.77	129	1.786
777	7	5.02	34.31	1.49	2.90	700	5.85	34.24	26.99	108	1.914
971	7	4.16	34.43	1.46	2.90	800	4.95	34.33	27.16	92	2.023
1460	7	2.67	34.56	1.96	2.90	1000	4.05	34.43	27.35	74	2.207
						1200	3.45	34.49	27.45	64	2.363

UMITAKA MARU; October 19, 1955; 1205-1400 GCT; 20°00'N, 149°20'E; 1117 13 272 1131 09x1 1 x x 3000-3 xx-xx 1 x. 58

Z	W	T	S	O_2	PO_4-P	Z	T	S	σ_t	δ_{T_3}	ΔD
0		28.4	34.65	4.52	0.10	0	28.4	34.65	22.03	580	0.000
10	10	28.48	34.67	-	0.10	10	28.48	34.67	22.02	581	0.058
25	10	28.49	34.70	-	0.10	25	28.49	34.70	22.03	580	0.145
49	10	28.45	34.72	-	0.10	50	28.45	34.72	22.06	578	0.291
72	19	28.13	34.89	4.94	0.10	75	27.90	34.92	22.38	547	0.432
95	19	25.78	35.17	4.79	0.10	100	25.50	35.19	23.35	454	0.558
142	19	22.96	35.26	4.32	0.20	150	22.50	35.25	24.26	367	0.766
192	15	20.09	35.01	4.14	0.40	200	19.75	34.99	24.83	313	0.939
289	15	16.33	34.69	4.50	0.40	300	16.05	34.65	25.50	249	1.228
385	15	13.36	34.43	4.33	1.00	400	12.80	34.36	25.95	207	1.466
481	15	9.57	34.18	3.77	1.70	500	9.10	34.20	26.50	154	1.656
577	15	7.39	34.36	2.61	2.00	600	7.10	34.36	26.92	115	1.800
770	15	5.28	34.31	1.33	2.70	700	6.05	34.33	27.04	103	1.918
962	15	4.40	34.45	1.45	2.80	800	5.15	34.33	27.14	94	2.026
1426	18	2.78	34.56	2.10	2.90	1000	4.25	34.45	27.34	75	2.214
						1200	3.60	34.42	27.45	64	2.372

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UMITAKA MARU; October 19, 1955; 2005-2233 GCT; 20°00'N, 148°00'E; 0312 01 275 1131 09x1 2 31-10 2 4500-1 36-01 1 x.

OBSERVED						INTERPOLATED			COMPUTED		
Z m	W ϰ°	T °C	S ‰	O_2 ml/L	PO_4-P μg at/L	Z m	T °C	S ‰	σ_t g/L	δ_{T_3} 10^{-5} cm/g	ΔD dyn. m
0		28.5	34.63	4.54	0.10	0	28.5	34.63	21.98	585	0.000
10	10	28.55	34.63	4.50	0.40	10	28.55	34.63	21.97	586	0.059
25	10	28.59	34.65	4.49	0.10	25	28.59	34.65	21.97	586	0.147
49	10	28.65	34.79	4.56	0.10	50	28.60	34.79	22.07	577	0.293
74	11	28.33	34.89	4.60	0.10	75	28.30	34.89	22.22	562	0.436
98	11	26.57	35.05	4.78	0.15	100	26.40	35.05	22.97	491	0.568
148	11	22.60	35.14	4.54	0.15	150	22.50	35.14	24.19	374	0.787
190	18	20.55	35.08	4.25	0.35	200	20.40	35.08	24.73	323	0.965
285	18	19.22	35.08	4.25	0.35	300	18.65	35.05	25.16	282	1.276
387	13	13.28	34.43	4.29	0.80	400	12.75	34.40	26.00	202	1.528
484	13	9.77	34.18	3.56	1.20	500	9.40	34.18	26.43	161	1.719
580	13	7.46	34.18	2.67	2.10	600	7.15	34.19	26.78	127	1.872
774	13	5.36	34.65u	2.51	1.30	700	5.95	34.25	26.99	107	1.998
967	13	4.15	34.43	1.45	2.50	800	5.20	34.31	27.13	95	2.108
1457	13	2.77	34.58	2.00	2.60	1000	4.05	34.45	27.37	72	2.293
1946	13	2.18	34.61	2.53	2.60	1200	3.45	34.51	27.47	63	2.449
2436	13	1.81	34.65	2.51	2.60	1500	2.70	34.58	27.60	50	2.647
						2000	2.15	34.61	27.67	44	2.927

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

BROWN BEAR; August 6, 1955; 1715 GCT; 54°54'N, 134°06'W; sounding, 100 fm; wind, 145°, force 19-23 kt; weather, rain; sea, very rough; visibility, 5; barometer, 29.70 in; clouds, 7, amt, 8; air temperature, dry 54°, wet 54°. 110-1

Z	T	S	O_2	PO_4-P	σ_t
0	10.75	32.10	6.29	0.69	24.58
8	10.74	32.12	6.29	0.72	24.61
16	10.52	32.16	6.14	0.83	24.68
24	10.44	32.17	6.12	0.69	24.69
41	8.42	32.36	5.47	1.37	25.17
61	7.56	32.57	6.12	1.58	25.45
82	6.81	32.72	5.30	1.67	25.68
107	6.15	33.05	4.30	1.93	26.02
131	5.97	33.34	3.25	2.11	26.26

Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	10.75	32.10	6.29	0.69	24.58	336.0	0.000
10	10.72	32.13	6.27	0.74	24.61	333.3	0.034
20	10.47	32.17	6.12	0.74	24.69	326.0	0.066
30	10.16	32.20	5.98	0.84	24.76	318.3	0.099
50	8.08	32.47	5.26	1.47	25.31	268.1	0.157
75	7.11	32.66	5.26	1.65	25.59	240.8	0.221
100	6.37	32.95	4.63	1.85	25.91	210.0	0.278

BROWN BEAR; August 6, 1955; 2126 GCT; 54°56'N, 134°31'W; sounding, 700 fm; wind, 200°, force 16 kt; weather, cloudy; sea, very rough; visibility, 7; barometer, 29.83 in; clouds, 4, amt, 7; air temperature, dry 54°, wet 54°. 110-2

Z	T	S	O_2	PO_4-P	σ_t
0	12.04	32.22	6.36	0.81	24.45
10	12.03	32.23	6.35	0.69	24.45
20	11.64	32.32	6.43	0.76	24.60
30	8.42	32.57	6.70	1.10	25.33
50	6.80	32.65	6.38	1.52	25.62
75	6.06	32.79	5.68	1.78	25.83
100	5.85	32.99	5.30	1.97	26.01
150	5.73	33.77	2.55	2.36	26.64
183	5.56	33.86	2.22	2.27u	26.73
200	5.30	33.87	1.90	2.50	26.77
276	5.05	33.96	1.50	2.42	26.87
469	4.43	34.10	0.69	2.61	27.05
712	3.92	34.22	0.40	2.78	27.20
956	3.35	34.33	0.32	2.78	27.33

Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	12.04	32.22	6.36	0.81	24.45	349.4	0.000
10	12.03	32.23	6.35	0.69	24.45	349.2	0.035
20	11.64	32.32	6.43	0.76	24.60	334.8	0.069
30	8.42	32.57	6.70	1.10	25.33	265.4	0.099
50	6.80	32.65	6.38	1.52	25.62	237.5	0.149
75	6.06	32.79	5.68	1.78	25.83	218.0	0.206
100	5.85	32.99	5.30	1.97	26.01	200.8	0.260
150	5.73	33.77	2.55	2.36	26.64	141.0	0.346
200	5.30	33.87	1.90	2.50	26.77	128.7	0.415
250	5.11	33.93	1.65	2.48	26.83	122.0	0.478
300	5.00	33.99	1.37	2.43	26.89	116.3	0.540
400	4.63	34.06	0.90	2.53	27.00	107.0	0.655
500	4.35	34.12	0.65	2.64	27.08	99.5	0.763
600	4.12	34.17	0.52	2.74	27.14	93.8	0.864
700	3.93	34.21	0.43	2.78	27.19	88.8	0.962
800	3.72	34.26	0.36	2.78	27.25	83.0	1.055
1000	(3.26)	(34.35)	(0.32)	(2.78)	(27.36)	(72.2)	(1.257)

BROWN BEAR; August 7, 1955; 0402 GCT; 55°04'N, 135°05'W; sounding, 1400 fm; wind, 200°, force 16 kt; weather, cloudy; sea, rough; visibility, 7; barometer, 29.86 in; clouds, 4, amt, 7; air temperature, dry 55°, wet 53°. 110-3

Z	T	S	O_2	PO_4-P	σ_t
0	11.78	32.48	6.56	1.00	24.69
10	11.78	32.49	6.48	0.96	24.70
19	11.75	32.50	6.45	0.94	24.72
28	9.14	32.64	6.97	1.18	25.27
47	6.95	32.65	6.56	1.55	25.60
70	6.22	32.72	6.48	1.58	25.75
94	5.78	32.82	6.29	1.71	25.88
141	5.78	33.33	4.69	2.02	26.27
188	5.44	33.71	3.49	2.25	26.63
150	5.95	33.48	3.98	2.07	26.38
292	4.60	33.92	1.79	2.30	26.89
459	4.20	34.09	0.91	2.94	27.07
789	3.54	34.29	0.38	2.94	27.29
1164	2.83	34.44	0.37	2.96	27.47
1523	2.34	-	-	-	-
2052	1.87	34.61	2.07	2.59	27.69
2467	1.70	34.64	1.97	2.62	27.72

Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	11.78	32.48	6.56	1.00	24.69	325.3	0.000
10	11.78	32.49	6.48	0.96	24.70	324.6	0.032
20	11.76	32.50	6.47	0.94	24.72	323.5	0.065
30	8.30	32.64	6.97	1.27	25.40	258.5	0.094
50	6.77	32.66	6.54	1.56	25.63	236.3	0.144
75	6.10	32.73	6.45	1.60	25.77	223.0	0.201
100	5.76	32.85	6.20	1.74	25.91	209.9	0.256
150	5.95	33.48	3.98	2.07	26.38	165.0	0.352
200	5.32	33.74	3.21	2.27	26.66	138.3	0.428
250	4.83	33.86	2.27	2.28	26.82	124.3	0.495
300	4.59	33.93	1.77	2.31	26.89	116.4	0.556
400	4.32	34.04	1.16	2.77	27.01	105.2	0.672
500	4.11	34.12	0.77	2.94	27.10	97.2	0.777
600	3.91	34.19	0.56	2.94	27.17	90.0	0.876
700	3.71	34.25	0.44	2.94	27.24	83.5	0.969
800	3.52	34.30	0.38	2.94	27.30	78.0	1.055
1000	3.12	34.38	0.38	2.95	27.40	68.3	1.245
1200	2.79	34.45	0.38	2.95	27.48		
1500	2.37	34.52	0.67	2.83	27.58		
2000	1.88	34.60	1.96	2.62	27.68		
2500	(1.68)	(34.64)	(1.94)	(2.62)	(27.72)		

UW NORPAC

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-4 BROWN BEAR; August 7, 1955; 1602 GCT; 54°58'N, 136°08'W; sounding, 1507 fm; wind, 215°, force 12 kt; weather, intermittent drizzle; sea, rough; visibility, 5; barometer, 29.81 in; clouds, 8, amt, 8; air temperature, dry 53°, wet 52°.

Z	T	S	O_2	PO_4-P	σ_t
0	11.46	32.40	6.46	0.77	24.69
9	11.38	32.40	6.54	0.81	24.70
19	9.45	32.65	6.94	1.14	25.23
28	8.34	32.71	7.07	1.18	25.45
47	6.95	32.71	6.84	1.39	25.64
71	5.98	32.74	6.70	1.52	25.79
94	5.66	32.77	6.74	1.62	25.87
141	5.45	33.28	4.93	1.89	26.28
188	5.31	33.82	2.52	1.83u	26.73
190	5.27	33.83	2.86	2.36	26.73
285	4.59	33.91	1.49	2.68	26.88
477	4.09	34.10	–	2.93	27.08
718	3.59	34.25	0.40	3.02	27.25
959	3.13	34.37	0.37	3.04	27.40
1445	2.35	34.39	0.35	3.17	27.48
1936	1.93	34.59	1.36	2.97	27.67

Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	11.46	32.40	6.46	0.77	24.69	325.5	0.000
10	11.38	32.40	6.55	0.85	24.70	324.3	0.032
20	9.29	32.66	6.97	1.14	25.26	271.2	0.062
30	8.18	32.71	7.06	1.19	25.47	251.2	0.088
50	6.69	32.71	6.82	1.41	25.68	231.6	0.137
75	5.90	32.74	6.73	1.54	25.80	219.8	0.193
100	5.63	32.79	6.68	1.66	25.88	213.5	0.248
150	5.41	33.48	4.36	1.99	26.44	159.1	0.343
200	5.22	33.85	2.33	2.41	26.76	129.1	0.416
250	4.79	33.89	1.76	2.59	26.84	121.5	0.479
300	4.54	33.92	1.39	2.71	26.90	116.7	0.541
400	4.24	34.02	0.81	2.85	27.01	106.1	0.655
500	4.03	34.12	0.53	2.94	27.11	96.8	0.762
600	3.84	34.18	0.40	2.99	27.17	90.3	0.860
700	3.62	34.24	0.37	3.02	27.24	83.9	0.952
800	3.42	34.28	0.37	3.03	27.29	78.8	1.042
1000	3.06	34.38	0.37	3.05	27.40	67.9	1.223
1200	2.70	34.39	0.35	3.12	27.44		
1500	2.29	34.40	0.40	3.17	27.49		
2000	(1.89)	(34.63)	(1.51)	(2.91)	(27.70)		

110-5 BROWN BEAR; August 8, 1955; 1014 GCT; 55°01'N, 139°10'W; sounding, 1716 fm; wind, 220°, force 12 kt; weather, intermittent drizzle; sea, slight; visibility, 4; barometer, 30.02 in; clouds, 6, amt, 8; air temperature, dry 52°, wet 52°.

Z	T	S	O_2	PO_4-P	σ_t
0	10.95	32.55	6.64	0.84	24.90
10	10.95	32.55	6.63	0.87	24.90
20	10.89	32.54	6.64	0.89	24.90
29	7.75	32.66	7.24	1.13	25.49
49	6.24	32.74	6.06	1.46	25.76
73	5.24	32.81	6.92	1.63	25.94
98	5.07	33.06	5.96	1.76	26.15
146	5.34	33.78	2.77	2.26	26.69
170	5.16	33.85	2.30	2.44	26.79
195	4.99	33.85	2.22	2.36u	26.79
255	4.52	33.91	1.55	2.62	26.89
427	4.14	34.12	0.57	2.61	27.10
638	3.66	34.23	0.37	2.85	27.22
852	3.25	34.36	0.30	2.89	27.39
1309	2.52	34.49	0.48	3.00	27.54
1779	2.05	34.44r	0.38	3.02	27.54
2250	1.77	34.65	1.67	2.88	27.73

Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	10.95	32.55	6.64	0.84	24.90	305.9	0.000
10	10.95	32.55	6.63	0.87	24.90	305.9	0.031
20	10.89	32.54	6.64	0.89	24.90	305.8	0.061
30	7.65	32.66	7.24	1.14	25.51	248.0	0.089
50	6.16	32.74	7.03	1.46	25.77	223.1	0.136
75	5.22	32.82	6.90	1.64	25.95	206.6	0.190
100	5.03	33.12	5.77	1.79	26.21	182.4	0.239
150	5.31	33.79	2.58	2.28	26.70	134.8	0.320
200	4.94	33.85	2.20	2.53	26.80	126.2	0.386
250	4.55	33.90	1.61	2.61	26.88	118.2	0.448
300	4.33	33.97	1.10	2.65	26.96	110.8	0.506
400	4.18	34.09	0.63	2.61	27.06	100.2	0.614
500	3.94	34.16	0.46	2.65	27.15	92.8	0.715
600	3.73	34.21	0.40	2.81	27.21	87.0	0.809
700	3.53	34.27	0.32	2.86	27.28	80.5	0.898
800	3.33	34.33	0.29	2.88	27.34	74.2	0.982
1000	2.99	34.42	0.34	2.92	27.45	63.7	1.131
1200	2.69	34.47	0.45	2.97	27.51		
1500	2.32	34.54	0.47	3.01	27.60		
2000	1.87	34.62	(0.80)	2.97	27.70		

BROWN BEAR; August 9, 1955; 0445 GCT; 55°01'N, 141°58'W; sounding, 2010 fm; wind, 155°, force 18 kt; weather, drizzle; sea, rough; visibility, 4; barometer, 29.82 in; clouds, 7, amt, 8; air temperature, dry 52°, wet 52°. 110-6

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	10.63	32.62	6.92	1.05	25.01	0	10.63	32.62	6.92	1.05	25.01	295.9	0.000
9	10.64	32.63	6.81	1.15	25.01	10	10.64	32.63	6.81	1.14	25.01	295.0	0.030
18	10.56	32.63	6.74	1.05	25.03	20	10.23	32.64	6.74	1.06	25.09	287.6	0.059
28	8.33	32.70	7.27	1.40	25.44	30	7.86	32.71	7.28	1.41	25.52	247.0	0.085
47	6.17	32.77	7.01	1.51	25.79	50	5.89	32.78	6.84	1.55	25.83	216.8	0.132
70	5.15	33.04	5.72	1.91	26.13	75	5.19	33.19	5.31	1.99	26.23	198.3	0.181
93	5.89	33.58	3.28	2.31	26.46	100	5.91	33.65	2.98	2.33	26.51	152.0	0.223
140	5.90	33.85	2.31	2.41	26.68	150	5.82	33.87	2.20	2.43	26.71	134.6	0.301
170	5.71	33.90	2.11	2.50u	26.74	200	5.58	33.88	2.07	2.56	26.74	131.0	0.363
187	5.65	33.87	2.12	2.46u	26.73	250	5.21	33.95	1.69	2.69	26.84	121.9	0.427
257	5.21	33.96	1.66	2.71	26.85	300	5.02	33.99	1.39	2.73	26.89	116.6	0.488
434	4.47	34.08	0.88	2.76	27.02	400	4.60	34.06	0.99	2.75	27.00	107.0	0.600
670	3.80	34.22	0.41	3.01	27.21	500	4.29	34.12	0.71	2.84	27.08	99.2	0.710
919	3.32	34.37	0.34	2.97	27.38	600	4.00	34.18	0.52	2.95	27.15	92.0	0.811
1426	2.49	34.51	0.63	2.97	27.56	700	3.75	34.24	0.36	3.02	27.23	84.9	0.904
1927	2.00	34.56	1.14	2.95	27.64	800	3.56	34.30	0.34	3.01	27.29	78.6	0.995
						1000	3.20	34.40	0.35	2.97	27.41	67.5	1.151
						1200	2.85	34.46	0.45	2.97	27.49		
						1500	2.40	34.52	0.69	2.97	27.58		
						2000	(1.92)	(34.57)	(1.25)	(2.95)	(27.66)		

BROWN BEAR; August 9, 1955; 1651 GCT; 56°02'N, 143°02'W; sounding, 1860 fm; wind, 160°, force 18 kt; weather, cloudy; sea, moderate; visibility, 7; barometer, 29.73 in; clouds, 8, amt, 6; air temperature, dry 51°, wet 50°. 110-7

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	10.72	32.80	6.63	1.46	25.14	0	10.72	32.80	6.63	1.46	25.14	283.7	0.000
10	10.68	32.79	6.60	1.49	25.13	10	10.68	32.79	6.60	1.49	25.13	283.5	0.028
20	9.27	32.79	6.82	1.44	25.37	20	9.27	32.79	6.82	1.44	25.37	261.6	0.056
30	7.31	32.79	7.15	1.44	25.66	30	7.31	32.79	7.15	1.44	25.66	233.8	0.080
50	5.68	32.81	7.15	1.68	25.89	50	5.68	32.81	7.15	1.68	25.89	212.2	0.125
74	4.75	32.84	6.97	1.86	26.02	75	4.74	32.84	6.97	1.87	26.02	199.8	0.176
99	4.54	33.07	6.14	2.01	26.22	100	4.53	33.09	6.12	2.02	26.23	179.0	0.225
148	4.04	33.57	3.61	2.51	26.67	150	4.02	33.59	3.42	2.51	26.19	136.5	0.305
187	4.02	33.83	2.12	2.80	26.88	200	3.98	33.91	1.55	2.89	26.94	111.5	0.368
198	3.94	33.91	1.59	2.88	26.95	250	3.96	33.95	0.99	3.06	26.97	108.2	0.423
281	3.93	33.97	0.80	3.08	26.99	300	3.91	33.99	0.71	3.09	27.01	105.0	0.477
469	3.67	34.14	0.46	3.11	27.15	400	3.78	34.09	0.52	3.10	27.10	96.1	0.581
707	3.29	34.28	0.40	3.21	27.31	500	3.62	34.16	0.45	3.12	27.18	89.8	0.678
948	2.90	34.38	0.46	3.15	27.42	600	3.46	34.22	0.43	3.18	27.24	83.8	0.768
1434	2.39	34.51	0.66	3.19	27.57	700	3.30	34.28	0.40	3.21	27.30	77.5	0.854
1921	1.98	34.60	1.14	3.04	27.68	800	3.13	34.33	0.43	3.21	27.36	72.3	0.935
2475	1.74	34.62	2.60	3.14	27.70	1000	2.81	34.40	0.47	3.15	27.44	64.1	1.082
						1200	2.60	34.45	0.54	3.16	27.50		
						1500	2.33	34.52	0.73	3.18	27.59		
						2000	1.95	34.61	1.27	3.04	27.69		
						2500	(1.73)	(34.62)	(2.69)	(3.15)	(27.71)		

UW NORPAC

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-8 BROWN BEAR; August 10, 1955; 0502 GCT; 57°09'N, 144°10'W; sounding, 2048 fm; wind, 095°, force 6 kt; weather, partly cloudy; sea, slight; visibility, 6; barometer, 29.80 in; clouds, 1, 4, 6, amt, 4; air temperature, dry 52°, wet 50°.

0	11.96	32.45	6.50	0.74	24.64	0	11.96	32.45	6.50	0.74	24.64	330.8	0.000
10	11.97	32.44	6.51	0.82	24.63	10	11.97	32.44	6.51	0.82	24.63	331.5	0.033
20	8.65	32.67	7.12	1.15	25.37	20	8.65	32.67	7.12	1.15	25.37	261.2	0.063
29	7.21	32.77	7.27	1.45	25.66	30	7.03	32.78	7.27	1.46	25.69	231.1	0.087
49	5.61	32.86	7.02	1.55	25.94	50	5.46	32.87	6.97	1.56	25.96	205.0	0.131
73	4.83	33.01	6.41	2.00	26.14	75	4.85	33.02	6.37	2.02	26.14	187.7	0.180
98	5.12	33.36	4.66	2.21	26.38	100	5.16	33.41	4.48	2.22	26.42	161.2	0.225
147	5.55	33.82	2.55	2.59	26.70	150	5.55	33.83	2.49	2.61	26.70	134.2	0.300
189	5.06	33.90	2.02	2.59u	26.81	200	5.00	33.89	1.86	2.74	26.82	123.9	0.365
196	5.03	33.89	2.02	2.73	26.81	250	4.69	33.93	1.44	2.80	26.88	117.2	0.426
284	4.51	33.96	1.20	2.84	26.92	300	4.46	33.97	1.11	2.86	26.94	111.9	0.485
475	4.02	34.14	0.53	3.05	27.12	400	4.20	34.07	0.65	2.97	27.05	101.8	0.593
716	3.47	34.27	0.39	3.25	27.28	500	3.97	34.15	0.52	3.07	27.13	93.2	0.696
964	2.99	34.37	0.40	3.12	27.40	600	3.74	34.21	0.47	3.15	27.21	87.0	0.790
1456	2.32	-	-	-	-	700	3.51	34.26	0.39	3.24	27.27	81.0	0.880
1950	1.90	34.62	1.51	3.03	27.70	800	3.31	34.31	0.37	3.23	27.33	75.7	0.964
						1000	2.92	34.38	0.44	3.12	27.42	66.5	1.118
						1200	2.66	34.43	0.56	3.10	27.48		
						1500	2.29	34.51	0.84	3.08	27.58		
						2000	(1.89)	(34.63)	(1.60)	(3.03)	(27.70)		

110-9 BROWN BEAR; August 11, 1955; 0525 GCT; 58°16'N, 142°57'W; sounding, 1947 fm; wind, 115°, force 6 kt; weather, cloudy; sea, smooth; visibility, 6; barometer, 29.98 in; clouds, 6, amt, 7; air temperature, dry 52°, wet 52°.

0	12.36	32.36	6.63	0.56	24.50	0	12.36	32.36	6.63	0.56	24.50	344.6	0.000
10	12.20	32.35	6.65	0.67	24.52	10	12.20	32.35	6.65	0.67	24.52	342.8	0.034
20	8.30	32.56	6.59	1.18	25.34	20	8.30	32.56	6.59	1.18	25.34	264.9	0.065
30	7.10	32.67	7.18	1.33	25.60	30	7.10	32.67	7.18	1.33	25.60	239.8	0.090
50	5.98	32.74	6.93	1.60	25.79	50	5.98	32.74	6.93	1.60	25.79	220.6	0.136
74	5.18	33.08	5.36	2.05	26.15	75	5.18	33.10	5.33	2.05	26.16	184.9	0.187
99	5.39	33.45	3.93	2.39	26.42	100	5.40	33.45	3.72	2.42	26.42	161.4	0.231
148	5.45	33.83	2.36	2.76	26.72	150	5.47	33.83	2.34	2.77	26.70	133.2	0.306
196	4.96	33.90	1.83	2.78	26.83	200	4.91	33.89	1.77	2.79	26.83	121.5	0.371
198	5.02	33.88	1.85	2.79	26.81	250	4.54	33.93	1.38	2.91	26.91	115.8	0.432
294	4.42	33.97	1.11	3.06	26.95	300	4.40	33.98	1.05	3.07	26.95	110.4	0.489
490	3.95	34.15	0.49	3.20	27.14	400	4.16	34.07	0.67	3.15	27.05	101.0	0.598
736	3.43	34.28	0.39	3.23	27.29	500	3.93	34.15	0.49	3.20	27.14	93.2	0.699
983	2.96	34.40	0.36	3.26	27.43	600	3.71	34.21	0.45	3.22	27.21	86.8	0.793
1480	2.28	34.52	0.75	3.20	27.59	700	3.50	34.26	0.43	3.23	27.27	80.9	0.882
1976	1.88	34.59	1.37	3.11	27.68	800	3.29	34.31	0.37	3.24	27.33	75.0	0.966
2474	1.67	34.63	2.13	2.97	27.72	1000	2.92	34.41	0.37	3.26	27.44	64.0	1.117
						1200	2.60	34.47	0.47	3.24	27.52		
						1500	2.25	34.52	0.76	3.20	27.59		
						2000	1.88	34.59	1.42	3.11	27.67		
						2500	(1.65)	(34.63)	(2.21)	(2.96)	(27.72)		

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

BROWN BEAR; August 11, 1955; 1310 GCT; 58°37'N, 142°24'W; sounding, 1780 fm; wind, 195°, force 2 kt; weather, cloudy; sea, smooth; visibility, 7; barometer, 30.02 in; clouds, 4, amt, 7; air temperature, dry 53°, wet 52°. 110-10

0	12.26	32.33	6.61	0.59	24.49	0	12.26	32.33	6.61	0.59	24.49	345.9	0.000
10	12.27	32.32	6.60	0.62	24.48	10	12.27	32.32	6.60	0.62	24.48	344.9	0.034
20	10.99	32.35	6.65	0.68	24.74	20	10.99	32.35	6.65	0.68	24.74	321.1	0.068
30	6.94	32.60	7.02	1.35	25.56	30	6.94	32.60	7.02	1.35	25.56	243.2	0.096
50	5.58	32.78	6.59	1.74	25.87	50	5.58	32.78	6.59	1.74	25.87	213.2	0.142
75	4.80	32.96	4.80	1.94	26.11	75	4.80	32.96	4.80	1.94	26.11	191.6	0.192
99	5.06	33.29	2.76	2.31	26.32	100	5.08	33.29	2.71	2.31	26.34	170.0	0.239
148	5.54	33.81	2.12	2.56	26.69	150	5.54	33.82	2.08	2.56	26.70	135.2	0.316
196	5.14	33.87	1.23u	2.68	26.79	200	5.08	33.87	1.41	2.72	26.80	126.3	0.382
198	5.13	33.86	2.20u	2.71	26.78	250	4.62	33.94	0.83	2.88	26.90	116.0	0.444
290	4.40	33.99	0.52	3.00	26.96	300	4.33	33.99	0.49	3.02	26.97	109.2	0.501
478	3.94	34.11	0.37	3.19	27.11	400	4.07	34.06	0.38	3.14	27.05	101.5	0.610
715	3.59	34.27	0.40	3.23	27.26	500	3.92	34.13	0.35	3.19	27.12	95.0	0.712
952	3.06	34.38	0.68	3.20	27.40	600	3.76	34.19	0.36	3.21	27.18	88.6	0.808
1427	2.35	34.51	1.28	3.19	27.57	700	3.58	34.26	0.41	3.23	27.26	81.4	0.898
1900	1.95	34.59	2.56	3.48	27.66	800	3.40	34.31	0.53	3.22	27.32	76.2	0.983
						1000	2.97	34.39	0.76	3.20	27.43	66.2	1.138
						1200	2.63	34.46	1.00	3.20	27.51		
						1500	2.28	34.52	1.40	3.21	27.59		
						2000	(1.91)	(34.60)	(2.64)	(3.60)	(27.68)		

BROWN BEAR; August 11, 1955; 1824 GCT; 58°54'N, 142°01'W; sounding, 1654 fm; wind, 250°, force 7 kt; weather, cloudy; sea, smooth; visibility, 7; barometer, 30.02 in; clouds, 4, amt, 7; air temperature, dry 56°, wet 54°. 110-11

0	12.20	32.37	6.61	0.65	24.54	0	12.20	32.37	6.61	0.65	24.54	341.0	0.000
10	12.13	32.38	6.63	0.65	24.55	10	12.13	32.38	6.63	0.65	24.55	338.8	0.034
20	9.73	32.52	7.00	0.99	25.08	20	9.73	32.52	7.00	0.99	25.08	288.6	0.065
30	7.84	32.65	7.25	1.23	25.48	30	7.84	32.65	7.25	1.23	25.48	251.3	0.092
50	6.33	32.74	7.09	1.63	25.75	50	6.33	32.74	7.09	1.63	25.75	225.1	0.140
74	5.14	32.84	6.60	1.77	25.97	75	5.10	32.84	6.50	1.78	25.98	203.9	0.194
99	4.94	33.14	5.35	2.12	26.23	100	4.93	33.18	4.01	2.15	26.26	176.4	0.242
148	5.58	33.78	2.80	2.52	26.67	150	5.57	33.78	2.73	2.53	26.66	138.1	0.322
198	5.32u	33.87u	2.40u	2.70u	26.77	200	5.21	33.87	2.17	2.67	26.78	127.9	0.389
198	5.22	33.88u	2.24	2.53u	26.78	250	4.95	33.93	1.78	2.75	26.86	120.2	0.452
296	4.73	33.96	1.51	2.81	26.91	300	4.71	33.96	1.48	2.82	26.91	115.2	0.512
494	4.09	34.08	0.73	2.58	27.07	400	4.36	34.02	1.04	2.70	26.99	107.1	0.627
732	3.56	34.25	0.39	2.59	27.26	500	4.07	34.08	0.71	2.58	27.06	100.0	0.735
980	3.11	34.40	0.35	2.59	27.42	600	3.82	34.15	0.55	2.58	27.15	92.2	0.836
1478	2.37	34.51	0.69	2.68	27.57	700	3.60	34.23	0.44	2.58	27.23	84.0	0.929
1978	1.88	34.61	1.42	2.96	27.69	800	3.40	34.29	0.37	2.58	27.30	77.9	1.016
2478	1.69	34.68	2.02	3.00	27.75	1000	3.07	34.41	0.36	2.59	27.43	65.5	1.170
						1200	2.74	34.46	0.46	2.64	27.49		
						1500	2.33	34.52	0.74	2.69	27.59		
						2000	1.87	34.62	1.44	2.96	27.70		
						2500	(1.67)	(34.68)	(2.05)	(3.01)	(27.75)		

UW NORPAC

110-12

BROWN BEAR; August 11, 1955; 2306 GCT; 59°05'N, 141°43'W; sounding, 650 fm; wind, calm; weather, cloudy; sea, smooth; visibility, 7; barometer, 30.06 in; clouds, 8, amt, 7; air temperature, dry 60°, wet 56°.

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	12.48	32.31	6.60	0.45	24.43	0	12.48	32.31	6.60	0.45	24.43	350.5	0.000
10	12.25	32.33	6.61	0.52	24.49	10	12.25	32.33	6.61	0.52	24.49	345.4	0.035
20	11.36	32.38	6.59	0.63	24.69	20	11.36	32.38	6.59	0.63	24.69	325.9	0.068
30	7.53	32.65	6.59	1.26	25.52	30	7.53	32.65	6.59	1.26	25.52	247.0	0.097
50	6.27	32.71	7.15	1.51	25.73	50	6.27	32.71	7.15	1.51	25.73	226.8	0.144
74	5.24	32.84	6.94	1.80	25.96	75	5.24	32.84	6.94	1.81	25.97	205.2	0.198
99	5.34	33.20	6.33	2.14	26.23	100	5.36	33.25	6.25	2.13	26.26	175.7	0.247
148	5.47	33.78	5.02	2.54	26.68	150	5.46	33.78	4.86	2.35	26.67	136.9	0.326
197	5.20	33.74u	2.11	2.55u	26.68	200	5.19	33.88	2.08	2.50	26.78	126.5	0.393
198	5.20	33.87	2.11	2.82u	26.78	250	4.88	33.93	1.66	2.59	26.86	119.6	0.456
293	4.65	33.97	1.37	2.91	26.93	300	4.62	33.98	1.33	2.91	26.93	113.0	0.515
489	4.12	34.13	0.64	3.34	27.10	400	4.31	34.06	0.86	3.17	27.03	103.6	0.627
740	3.76	34.22	0.39	3.01	27.21	500	4.12	34.13	0.62	3.34	27.10	96.8	0.731
987	3.28	34.34	0.36	3.23	27.36	600	3.98	34.18	0.48	3.20	27.15	91.4	0.830
						700	3.83	34.21	0.41	3.04	27.19	88.0	0.924
						800	3.66	34.24	0.37	3.01	27.23	83.9	1.017
						1000	(3.25)	(34.35)	(0.37)	(3.26)	(27.36)	(72.0)	(1.186)

110-13

BROWN BEAR; August 12, 1955; 0442 GCT; 59°21'N, 141°34'W; sounding, 120 fm; wind, 165°, force 3 kt; weather, drizzle; sea, smooth; visibility, 5; barometer, 30.03 in; clouds, 7, amt, 8; air temperature, dry 52°, wet 52°.

0	12.29	31.93	6.71	0.28	24.18	0	12.29	31.93	6.71	0.28	24.18	375.2	0.000
10	11.83	31.97	6.61	0.32	24.29	10	11.83	31.97	6.61	0.32	24.29	364.0	0.037
20	10.62	32.09	6.20	0.69	24.60	20	10.62	32.09	6.20	0.69	24.60	334.6	0.072
30	7.80	32.29	6.18	0.92	25.20	30	7.80	32.29	6.18	0.92	25.20	277.2	0.102
50	6.70	32.40	5.85	1.65	25.44	50	6.70	32.40	5.85	1.65	25.44	255.2	0.156
74	6.19	32.59	6.01	1.70	25.65	75	6.19	32.60	6.01	1.70	25.66	234.0	0.217
99	5.48	32.74	6.32	1.77	25.86	100	5.46	32.75	6.27	1.78	25.86	214.2	0.274
129	5.40	33.14	4.86	2.15	26.17	150	5.47	33.50	3.38	2.56	26.45	158.2	0.368
158	5.51	33.64	2.59	2.73	26.56								

110-14

BROWN BEAR; August 12, 1955; 1057 GCT; 59°14'N, 142°54'W; sounding, 1510 fm; wind, 180°, force 7 kt; weather, intermittent drizzle; sea, slight; visibility, 6; barometer, 29.96 in; clouds, 8, amt, 8; air temperature, dry 53°, wet 52°.

0	12.20	31.65	6.34	0.34	23.98	0	12.20	31.65	6.34	0.34	23.98	394.1	0.000
10	11.75	31.79	6.43	0.44	24.17	10	11.75	31.79	6.43	0.44	24.17	375.4	0.038
20	8.22	32.18	6.62	1.01	25.05	20	8.22	32.18	6.62	1.01	25.05	290.5	0.072
30	7.36	32.26	6.41	1.23	25.24	30	7.36	32.26	6.41	1.23	25.24	272.8	0.100
49	6.12	32.45	5.85	1.72	25.55	50	6.10	32.45	5.85	1.73	25.55	244.0	0.152
74	5.63	32.60	5.80	1.78	25.73	75	5.61	32.61	5.81	1.78	25.74	226.8	0.212
98	5.30	32.84	5.79	1.76	25.95	100	5.32	32.85	5.71	1.76	25.96	205.0	0.266
148	5.47	33.48	3.53	2.29	26.44	150	5.45	33.49	3.42	2.29	26.45	158.9	0.358
197	5.29	33.87	2.17	2.58	26.77	200	5.23	33.87	2.03	2.62	26.78	127.9	0.431
198	5.23	33.86	2.06	2.61	26.77	250	4.81	33.94	1.41	2.79	26.88	118.1	0.494
294	4.49	33.98	1.11	2.88	26.95	300	4.48	33.99	1.10	2.89	26.95	111.0	0.553
493	4.07	34.11	0.57	2.94	27.09	400	4.23	34.05	0.78	2.93	27.03	104.0	0.664
742	3.60	34.23	0.41	3.16	27.24	500	4.04	34.11	0.58	2.95	27.10	97.6	0.769
990	3.13	34.35	0.34	3.11	27.38	600	3.86	34.16	0.48	3.05	27.15	92.0	0.869
1288	2.68	34.44	0.44	3.21	27.49	700	3.68	34.21	0.41	3.14	27.21	86.3	0.964
1586	2.16	34.54	0.91	3.07	27.61	800	3.49	34.26	0.37	3.18	27.27	80.9	1.054
						1000	3.12	34.35	0.34	3.11	27.38	70.8	1.219
						1200	2.80	34.42	0.35	3.16	27.46		
						1500	2.29	34.51	0.77	3.15	27.58		

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED			UW
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	NORPAC
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m	

BROWN BEAR; August 12, 1955; 1957 GCT; 59°13'N, 144°28'W; sounding, 2190 fm; wind, 105°, force 18 kt; weather, intermittent drizzle; sea, slight; visibility, 6; barometer, 29.76 in; clouds, 8, amt, 8; air temperature, dry 52°, wet 51°. 110-15

0	12.24	32.18	6.74	0.33	24.38	0	12.24	32.18	6.74	0.33	24.38	
9	12.24	32.19	6.66	0.36	24.38	10	12.24	-	6.69	0.37	-	
18	12.08	-	6.73	0.45	-	20	10.56	-	6.55	0.48	-	
27	7.68	-	6.09	1.17	-	30	7.38	-	6.03	1.18	-	
44	6.86	-	5.81	1.58	-	50	6.36	-	5.82	1.64	-	
66	5.90	-	5.84	1.78	-	75	5.75	-	5.85	1.81	-	
88	5.62	-	5.82	1.82	-	100	5.44	-	5.72	1.83	-	
133	5.18	-	5.16	1.88	-	150	5.34	-	4.74	2.04	-	
161	5.49	-	4.09	2.22	-	200	5.61	-	2.61	2.41	-	
177	5.70	-	3.01	2.36	-	250	5.20	-	2.05	2.51	-	
242	5.26	-	2.13	2.50	-	300	4.82	-	1.66	2.60	-	
408	4.31	-	0.95	2.74	-	400	4.35	-	1.00	2.73	-	
617	3.88	-	0.47	3.11	-	500	4.12	-	0.67	2.94	-	
830	3.42	-	0.39	3.03	-	600	3.91	-	0.52	3.10	-	
1259	2.68	-	0.45	3.15	-	700	3.70	-	0.44	3.10	-	
1696	2.18	-	0.87	3.08	-	800	3.49	-	0.40	3.01	-	
2160	1.85	-	1.47	2.97	-	1000	3.10	-	0.36	3.09	-	
						1200	2.77	-	0.43	3.14	-	
						1500	2.39	-	0.67	3.11	-	
						2000	1.95	-	1.25	3.01	-	

BROWN BEAR; August 13, 1955; 0058 GCT; 59°22'N, 144°45'W; sounding, 987 fm; wind, 120°, force 28 kt; weather, drizzle; sea, rough; visibility, 6; barometer, 29.68 in; clouds, 8, amt, 8; air temperature, dry 52, wet 51°. 110-16

0	12.11	32.13	6.52	0.34	24.36	0	12.11	32.13	6.52	0.34	24.36	356.0	0.000
9	12.11	32.13	6.61	0.34	24.36	10	12.11	32.13	6.61	0.34	24.36	356.0	0.036
18	11.98	32.14	6.57	0.38	24.39	20	11.09	32.15	6.55	0.44	24.56	337.0	0.070
28	7.61	32.19	6.52	1.01	25.15	30	7.50	32.20	6.47	1.05	25.17	279.2	0.101
47	7.05	32.33	6.24	1.47	25.33	50	6.96	32.35	6.16	1.52	25.36	261.4	0.155
71	6.07	32.43	5.70	1.76	25.54	75	5.94	32.45	5.72	1.77	25.57	242.2	0.218
95	5.57	32.69	5.85	1.79	25.80	100	5.50	32.74	5.86	1.80	25.85	215.5	0.276
143	5.44	33.20	4.57	2.18u	26.22	150	5.51	33.25	4.40	2.20	26.25	177.2	0.377
156	5.58	33.31	4.05	2.16u	26.28	200	5.48	33.80	2.50	2.55	26.69	136.0	0.455
189	5.54	33.76	2.63	2.53	26.65	250	5.06	33.89	2.04	2.58	26.81	124.5	0.522
231	5.17	33.86	2.21	2.56	26.77	300	4.75	33.94	1.65	2.63	26.89	117.1	0.585
385	4.40	34.02	1.03	2.80	26.99	400	4.35	34.03	0.99	2.84	27.00	106.2	0.700
575	3.90	34.17	0.57	3.14	27.16	500	4.08	34.11	0.68	3.04	27.09	97.9	0.806
776	3.53	34.27	0.36	3.20	27.27	600	3.86	34.18	0.56	3.15	27.16	90.2	0.906
1107	2.92	34.22r	0.43	3.19	27.29	700	3.68	34.24	0.44	3.20	27.23	84.2	0.999
1459	2.40	34.50	0.68	3.08	27.56	800	3.49	34.28	0.38	3.20	27.28	79.5	1.088
						1000	3.13	34.36	0.39	3.20	27.39	70.2	1.250
						1200	2.79	34.43	0.47	3.16	27.46		
						1500	(2.33)	(34.51)	(0.72)	(3.07)	(27.58)		

BROWN BEAR; August 13, 1955; 0356 GCT; 59°30'N, 145°05'W; sounding, 102 fm; wind, 090°, force 30 kt; weather, drizzle; sea, rough; visibility, 6; barometer, 29.64 in; clouds, 8, amt, 8; air temperature, dry 49°, wet 49°. 110-17

0	12.28	31.67	6.32	0.41	23.98	0	12.28	31.67	6.32	0.41	23.98	394.1	0.000
10	12.29	31.68	6.32	0.36	23.98	10	12.29	31.68	6.32	0.36	23.98	394.1	0.039
19	12.18	31.69	6.32	0.36	24.01	20	11.93	31.70	6.35	0.36	24.07	385.6	0.078
29	8.85	32.10	6.75	0.90	24.90	30	8.46	32.15	6.76	0.92	24.99	297.9	0.113
48	6.96	32.34	6.78	1.43	25.35	50	6.79	32.36	6.78	1.46	25.39	259.8	0.168
72	6.09	32.48	6.79	1.77	25.57	75	6.02	32.49	6.80	1.77	25.59	240.8	0.231
97	5.63	32.63	6.92	1.57	25.75	100	(5.58)	(32.65)	(6.94)	(1.53)	(25.77)	(223.8)	(0.290)

UW NORPAC

OBSERVED						INTERPOLATED						COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
110-18	BROWN BEAR; August 13, 1955; 0720 GCT; 59°56'N, 145°38'W; sounding, 52 fm; wind, 055°, force 24 kt; weather, cloudy; sea, slight; visibility 7; barometer, 29.69 in; clouds 6, 8, amt 6; air temperature, dry 49°F, wet 49°F.													
0	11.54	30.82	6.44	0.40	23.46	0	11.54	30.82	6.44	0.40	23.46	443.8	0.000
10	11.56	30.87	6.41	0.48	23.49	10	11.56	30.87	6.41	0.48	23.49	441.0	0.044
19	11.23	31.34	6.43	-	23.91	20	11.17	31.36	6.43	0.56	23.94	398.0	0.086
28	10.09	31.58	6.43	0.69	24.29	30	9.49	31.65	6.42	0.72	24.44	350.3	0.124
47	7.97	32.08	6.17	1.14	25.01	50	7.79	32.13	6.15	1.18	25.07	290.3	0.188
71	6.49	32.37	6.04	1.61	25.44								
110-19	BROWN BEAR; August 13, 1955; 1019 GCT; 60°05'N, 146°15'W; sounding, 40 fm; wind, 040°, force 8 kt; weather, cloudy; sea, slight; visibility, 7; barometer, 29.70 in; clouds, 8, amt, 6; air temperature, dry 50°, wet 49°.													
0	10.19	31.12	6.59	0.57	23.92	0	10.19	31.12	6.59	0.57	23.92	399.9	0.000
10	9.99	31.27	6.65	0.48	24.07	10	9.99	31.27	6.65	0.48	24.07	385.6	0.039
20	8.28	31.63	6.50	0.92	24.61	20	8.28	31.63	6.50	0.92	24.61	334.1	0.075
29	7.14	31.73	6.36	1.33	24.85	30	7.10	31.75	6.35	1.38	24.87	309.4	0.107
44	6.45	31.95	6.00	1.60	25.12								
110-19A	BROWN BEAR; August 17, 1955; 0208 GCT; 60°35'N, 145°59'W; sounding, 115 fm; wind, 255°, force 9 kt; weather, partly cloudy; sea, smooth; visibility, 8; barometer, 29.56 in; clouds, 1, 4, amt, 2; air temperature, dry 55°, wet 52°.													
0	12.96	25.84	6.92	0.22	19.36	0	12.96	25.84	6.92	0.22	19.36	836.9	0.000
5	12.50	26.26	6.88	0.26	19.76	10	10.88	28.63	6.66	0.52	21.87	595.3	0.072
10	10.88	28.63	6.66	0.52	21.87	20	9.89	29.54	6.55	0.78	22.74	512.4	0.127
19	9.97	29.51	6.54	0.77	22.71	30	9.39	29.84	6.69	0.86	23.05	483.0	0.177
29	9.54	29.79	6.68	0.84	22.99	50	7.87	30.60	6.66	1.18	23.87	404.7	0.266
47	8.13	30.55	6.70	1.13	23.79	75	5.89	31.39	6.31	1.56	24.74	321.7	0.356
71	5.97	31.37	6.69	1.53	24.72	100	5.44	31.49	6.08	1.71	24.87	309.4	0.437
95	5.54	31.47	6.13	1.67	24.85	150	5.14	32.37	5.03	2.29	25.61	238.9	0.576
124	5.13	32.07	5.80	2.13	25.37								
152	5.15	32.38	5.02	2.30	25.60								
180	5.21	32.41	4.95	2.10	25.63								
110-19B	BROWN BEAR; August 17, 1955; 0650 GCT; 60°28'N, 146°52'W; sounding, 232 fm; wind, 253°, force 8 kt; weather, partly cloudy; sea, smooth; visibility, 8; barometer, 29.58 in; clouds, 1, 4, amt, 2; air temperature, dry 56°, wet 53°.													
0	12.43	27.52	6.81	0.25	20.75	0	12.43	27.52	6.81	0.25	20.75	703.2	0.000
5	10.71	28.95	6.75	0.51	22.15	10	10.50	29.43	6.51	0.57	22.56	530.0	0.062
10	10.50	29.43	6.51	0.57	22.56	20	9.70	30.22	6.47	0.77	23.30	459.1	0.111
20	9.70	30.22	6.47	0.77	23.30	30	8.82	30.64	6.52	0.91	23.76	415.2	0.155
29	9.16	30.54	6.52	0.88	23.64	50	5.50	31.50	6.62	1.53	24.87	309.4	0.227
49	5.50	31.49	6.62	1.52	24.86	75	5.24	31.65	6.40	1.64	25.02	295.1	0.303
73	5.26	31.64	6.43	1.63	25.01	100	4.95	31.96	6.03	1.80	25.29	269.3	0.375
98	4.92	31.92	6.07	1.78	25.27	150	5.23	32.49	5.04	2.13	25.69	231.3	0.503
147	5.24	32.47	5.10	2.12	25.68	200	5.15	32.76	4.57	2.29	25.91	210.4	0.614
197	5.17	32.75	4.58	2.28	25.90	250	5.23	32.92	4.47	2.32	26.03	199.1	0.719
246	5.22	32.91	4.49	2.32	26.02	300	5.28	33.13	4.22	2.28	26.17	185.8	0.821
295	5.24	33.12	4.24	2.27	26.18								
373	5.20	33.30	3.79	2.47	26.32								

OBSERVED						INTERPOLATED						COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

BROWN BEAR; August 17, 1955; 2228 GCT; 59°16'N, 149°30'W; sounding, 77 fm; wind, calm; weather, partly cloudy; sea, smooth; visibility, 9; barometer, 29.78 in; clouds, 1, amt, 1; air temperature, dry 56°, wet 53°. 110-20

0	11.74	30.45	6.93	0.36	23.13	0	11.74	30.45	6.93	0.36	23.13	475.4	0.000
10	9.14	30.92	6.33	0.81	23.94	10	9.14	30.92	6.33	0.81	23.94	398.9	0.044
20	8.76	31.34	6.35	1.02	24.32	20	8.76	31.34	6.35	1.02	24.32	361.7	0.082
30	8.00	31.49	6.18	1.13	24.54	30	8.00	31.49	6.18	1.13	24.54	340.8	0.117
50	7.68	32.05	6.18	1.30	25.03	50	7.68	32.05	6.18	1.30	25.03	294.1	0.180
74	6.41	32.39	5.88	1.65	25.46	75	6.40	32.40	5.87	1.70	25.47	252.3	0.249
98	5.71	32.59	5.14	1.99	25.71	100	(5.67)	(32.60)	(5.05)	(2.01)	(25.72)	(228.5)	0.311

BROWN BEAR; August 18, 1955; 0409 GCT; 58°50'N, 149°04'W; sounding, 116 fm; wind, 255°, force 4 kt; weather, partly cloudy; sea, smooth; visibility, 9; barometer, 29.83 in; clouds, 1, amt, 1; air temperature, dry 58°, wet 56°. 110-21

0	13.31	32.14	6.45	0.43	24.14	0	13.31	32.14	6.45	0.43	24.14	378.0	0.000
9	12.45	32.17	6.47	0.47	24.33	10	12.38	32.17	6.47	0.48	24.34	358.8	0.037
18	12.13	32.16	6.50	0.51	24.38	20	11.96	32.15	6.51	0.52	24.41	352.0	0.072
28	11.81	32.14	6.52	0.56	24.43	30	11.25	32.14	6.52	0.59	24.53	341.0	0.107
47	8.71	32.38	6.52	1.12	25.13	50	8.38	32.42	6.51	1.21	25.22	276.0	0.169
70	6.48	32.62	6.13	1.67	25.64	75	6.20	32.66	6.03	1.79	25.70	229.5	0.232
94	5.57	32.85	5.12	2.17	25.93	100	5.53	32.93	4.92	2.20	26.00	201.6	0.287
141	5.40	33.44	3.61	2.30	26.41	150	5.33	33.49	3.38	2.33	26.46	157.5	0.378
188	5.13	33.67	2.68	2.57	26.64								

BROWN BEAR; August 18, 1955; 1030 GCT; 58°23'N, 148°45'W; sounding, 70 fm; wind, 280°, force 14 kt; weather, partly cloudy; sea, slight; visibility, 9; barometer, 29.89 in; clouds, 1, amt, 1; air temperature, dry 54°, wet 52°. 110-22

0	11.34	32.02	6.64	0.65	24.42	0	11.34	32.02	6.64	0.65	24.42	351.7	0.000
8	8.64	32.22	6.64	1.23	25.03	10	8.27	32.23	6.45	1.34	25.09	288.8	0.032
16	6.72	32.24	6.14	1.55	25.31	20	6.42	32.28	5.98	1.66	25.38	260.3	0.060
24	5.91	32.42	5.88	1.78	25.55	30	5.90	32.54	5.82	1.82	25.63	234.7	0.084
41	5.83	32.69	5.66	1.97	25.77	50	5.64	32.84	5.52	2.07	25.92	209.8	0.129
61	5.44	32.95	5.16	2.18	26.03	75	5.33	33.07	4.57	2.32	26.13	188.8	0.178
81	5.27	33.18	4.21	2.47	26.21								

BROWN BEAR; August 18, 1955; 1718 GCT; 57°58'N, 148°27'W; sounding, 790 fm; wind, 235°, force 10 kt; weather, partly cloudy; sea, slight; visibility 9; barometer, 29.94 in; clouds 1, amt 1; air temperature, dry 55°F, wet 54°F. 110-23

0	12.61	32.29	6.44	0.61	24.39	0	12.61	32.29	6.44	0.61	24.39	354.0	0.000
10	12.56	32.29	6.42	0.65	24.40	10	12.56	32.29	6.42	0.65	24.40	353.0	0.035
19	12.45	32.30	6.45	0.71	24.43	20	12.41	32.30	6.54	0.72	24.44	350.2	0.070
29	10.53	32.40	6.82	0.83	24.85	30	10.26	32.42	6.82	0.86	24.91	304.0	0.103
48	6.73	32.58	6.82	1.46	25.57	50	6.35	32.63	6.82	1.53	25.66	233.8	0.157
72	4.87	32.94	6.83	2.04	26.08	75	4.88	32.99	6.72	2.03	26.12	190.1	0.210
96	5.13	33.24	4.67	2.36	26.28	100	5.16	33.29	4.38	2.41	26.32	170.4	0.256
143	5.31	33.73	2.58	2.70	26.65	150	5.29	33.77	2.41	2.72	26.69	136.0	0.334
178	4.99	33.90u	1.85	2.78	26.83	200	4.91	33.89	1.66	2.80	26.83	122.9	0.399
191	5.03	33.88	1.94	2.79	26.81	250	4.53	33.94	1.24	3.11	26.91	115.3	0.460
268	4.42	33.95	1.14	3.16	26.93	300	4.27	33.98	0.99	3.17	26.96	109.4	0.517
456	3.84	34.11	0.54	3.20	27.12	400	3.93	34.07	0.64	3.19	27.07	99.4	0.625
692	3.55	34.25	0.38	3.23	27.26	500	3.80	34.14	0.47	3.21	27.14	92.7	0.725
931	3.07	34.34	0.39	3.24	27.37	600	3.69	34.20	0.40	3.23	27.20	87.4	0.813
						700	3.52	34.25	0.36	3.24	27.26	82.0	0.909
						800	3.35	34.30	0.36	3.24	27.32	76.7	0.994
						1000	(2.91)	(34.36)	(0.45)	(3.24)	(27.41)	(68.0)	(1.152)

UW
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OBSERVED						COMP
Z	T	S	O_2	PO_4-P	σ_t	
m	°C	‰	ml/L	µg at/L	g/L	

INTERPOLATED						COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-24 BROWN BEAR; August 19, 1955; 0744 GCT; 57°30'N, 148°15'W; sounding, 2175 fm; wind, 260°, force 14 kt; weather, cloudy; sea, slight; visibility, 7; barometer, 29.95 in; clouds, 8, amt, 7; air temperature, dry 53°, wet 52°.

0	11.93	32.38	6.51	0.65	24.59	0	11.93	32.38	6.51	0.65	24.59	335.2	0.000
10	11.94	32.38	6.57	0.61	24.59	10	11.94	32.38	6.57	0.61	24.59	335.3	0.034
20	7.48	32.62	6.84	1.30	25.50	20	7.48	32.62	6.84	1.30	25.50	249.0	0.063
29	6.07	32.75	6.59	1.57	25.79	30	5.95	32.79	6.56	1.59	25.83	216.6	0.086
49	4.91	33.00	5.98	2.08	26.12	50	4.91	33.04	5.95	2.08	26.15	187.0	0.126
74	4.91	33.31	4.49	2.44	26.36	75	4.93	33.31	4.46	2.45	26.36	166.8	0.170
98	5.24r	33.77r	2.98	2.56	-	100	4.99	33.51	2.81	2.56	26.52	152.0	0.211
147	4.95	33.76	2.00	2.29	26.73	150	4.92	33.77	1.92	2.29	26.73	132.0	0.283
178	4.77	33.84	1.79	2.93u	26.80	200	4.56	33.94	1.37	2.84	26.91	115.2	0.347
196	4.59	33.93	1.43	2.84	26.89	250	4.38	33.95	1.09	2.96	26.93	112.7	0.403
258	4.37	33.96	1.01	2.90u	26.94	300	4.29	34.00	0.84	3.02	26.98	108.0	0.459
267	4.37	33.96	1.04	2.98	26.94	400	4.01	34.13	0.54	3.08	27.11	96.0	0.564
481	3.89	34.17	0.44	3.10	27.16	500	3.83	34.18	0.43	3.10	27.17	90.2	0.660
706	3.37	34.27	0.39	3.06	27.29	600	3.59	34.21	0.39	3.06	27.22	85.4	0.753
1186	2.55	34.45	0.49	3.13	27.50	700	3.36	34.27	0.38	3.06	27.29	79.0	0.839
1775	2.02	34.48	0.67	3.19	27.57	800	3.17	34.32	0.40	3.07	27.35	73.3	0.921
2362	1.69	34.65r	1.87	3.41r	27.73	1000	2.81	34.40	0.44	3.10	27.44	64.2	1.070
2446	1.69	34.63	2.02	2.94	27.71	1200	2.53	34.45	0.48	3.12	27.51		
2928	1.54	34.68	2.50	2.92	27.77	1500	2.25	34.48	0.59	3.16	27.56		
2933	1.56	34.69	2.49	2.74	27.78	2000	1.87	34.53	1.18	3.12	27.63		
3423	1.48	34.69	2.98	2.82	27.78	2500	1.63	34.64	2.11	2.92	27.73		
3428	1.46	34.70	3.05	2.97	27.79	3000	1.52	34.69	2.58	2.84	27.78		

110-25 BROWN BEAR; August 20, 1955; 0526 GCT; 56°33'N, 147°37'W; sounding, 2748 fm; wind, 248°, force 12 kt; weather, cloudy; sea, slight; visibility, 8; barometer, 30.05 in; clouds, 6, amt, 7; air temperature, dry 53°, wet 52°.

0	11.81	32.58	6.44	1.00	24.77	0	11.81	32.58	6.44	1.00	24.77	318.8	0.000
10	11.81	32.58	6.40	0.99	24.77	10	11.81	32.58	6.40	0.99	24.77	318.8	0.032
20	9.09	32.71	6.79	1.28	25.34	20	9.09	32.71	6.79	1.28	25.34	264.7	0.061
30	6.43	32.84	7.15	1.63	25.82	30	6.43	32.84	7.15	1.63	25.82	219.0	0.085
49	4.91	32.99	6.80	2.03	26.12	50	4.79	33.00	6.74	2.05	26.14	188.1	0.126
74	4.20	33.24	5.62	2.41	26.38	75	4.20	33.27	5.47	2.42	26.41	162.2	0.170
98	4.15	33.54	3.82	2.81	26.63	100	4.13	33.58	3.47	2.83	26.67	138.0	0.208
147	4.30	33.85	1.68	3.16	26.86	150	4.28	33.86	1.65	3.16	27.87	118.7	0.273
193	4.18	33.83u	1.31	2.97u	26.85	200	4.14	33.93	0.85	3.20	26.94	111.8	0.332
196	4.10	33.92	1.05	3.19	26.94	250	4.10	34.01	0.59	3.22	27.01	105.5	0.386
286	4.06	34.05	0.54	3.24	27.04	300	4.05	34.06	0.52	3.24	27.05	101.1	0.439
473	3.71	34.20	0.41	3.28	27.20	400	3.90	34.15	0.44	3.27	27.14	92.9	0.538
706	3.19	34.33	0.39	3.35	27.35	500	3.68	34.22	0.40	3.29	27.22	85.8	0.630
950	2.76	34.42	0.48	3.33	27.46	600	3.42	34.28	0.39	3.32	27.29	79.0	0.717
1440	2.18	34.53	0.86	3.33	27.60	700	3.20	34.32	0.40	3.35	27.35	74.0	0.798
1930	1.84	34.60	1.55	3.21	27.69	800	3.00	34.37	0.41	3.34	27.41	68.0	0.874
2422	1.67	34.63	2.12	3.13	27.71	1000	2.70	34.44	0.52	3.33	27.48	60.5	1.013
						1200	2.45	34.48	0.65	3.33	27.54		
						1500	2.13	34.54	0.95	3.32	27.61		
						2000	1.80	34.61	1.65	3.19	27.70		
						2500	(1.63)	(34.63)	(2.18)	(3.12)	(27.72)		

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

UW
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BROWN BEAR; August 21, 1955; 0005 GCT; 55°00'N, 146°44'W; sounding, 2250 fm; wind, 170°, force 8 kt; weather, overcast; sea, slight; visibility, 8; barometer, 30.16 in; clouds, 6, amt, 8; air temperature, dry 53°, wet 52°. 110-26

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	11.57	32.70	6.52	1.39	24.91	0	11.57	32.70	6.52	1.39	24.91	305.2	0.000
10	11.48	32.69	6.45	1.26	24.92	10	11.48	32.69	6.45	1.26	24.92	304.4	0.030
20	11.33	32.67	6.44	1.26	24.93	20	11.33	32.67	6.44	1.26	24.93	304.0	0.061
30	10.15	32.75	6.69	1.46	25.20	30	10.15	32.75	6.69	1.46	25.20	278.0	0.090
49	5.36	32.94	7.15	2.04	26.03	50	4.67	32.95	7.15	2.04	26.11	190.9	0.137
74	3.90	33.12	6.59	2.35	26.32	75	3.89	33.13	6.55	2.38	26.33	169.8	0.182
98	3.76	33.39	4.65	2.70	26.54	100	3.77	33.44	4.48	2.71	26.59	144.9	0.222
147	4.02	33.81	1.59	3.10	26.86	150	4.04	33.82	1.44	3.10	26.86	119.3	0.289
192	3.99	33.77u	0.85	3.14	26.83	200	3.98	33.94	0.77	3.14	26.96	109.4	0.347
196	4.00	33.93	0.82	3.14	26.95	250	3.90	34.01	0.59	3.25	27.03	103.2	0.399
286	3.84	34.05	0.52	3.35	27.07	300	3.83	34.07	0.50	3.35	27.08	98.4	0.450
472	3.60	34.19	0.37	3.35	27.20	400	3.70	34.14	0.41	3.36	27.15	92.0	0.547
710	3.14	34.33	0.40	3.11	27.36	500	3.55	34.21	0.47	3.33	27.22	85.0	0.640
951	2.74	34.38	0.48	3.22	27.43	600	3.35	34.27	0.47	3.25	27.29	79.0	0.725
1440	2.23	34.51	0.86	3.14	27.59	700	3.17	34.32	0.40	3.12	27.35	73.6	0.806
1933	1.90	34.59	1.40	2.83	27.67	800	2.99	34.36	0.44	3.14	27.40	68.3	0.882
2425	1.69	34.63	2.02	2.94	27.71	1000	2.70	34.40	0.50	3.23	27.45	63.4	1.024
						1200	2.48	34.45	0.65	3.23	27.51		
						1500	2.19	34.52	0.93	3.11	27.59		
						2000	1.87	34.60	1.49	2.83	27.68		
						2500	(1.67)	(34.63)	(2.12)	(2.99)	(27.72)		

BROWN BEAR; August 22, 1955; 1005 GCT; 55°00'N, 148°34'W; sounding, 2285 fm; wind, 190°, force 8 kt; weather, intermittent drizzle; sea, smooth; visibility, 6; barometer, 30.19 in; clouds, 0, amt, 6; air temperature, dry 55°, wet 54°. 110-27

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	12.28	32.58	6.36	0.94	24.68	0	12.28	32.58	6.36	0.94	24.68	327.2	0.000
10	12.03	32.63	6.34	1.14	24.77	10	12.03	32.63	6.34	1.14	24.77	319.0	0.032
20	8.68	32.76	7.03	1.44	25.44	20	8.68	32.76	7.03	1.44	25.44	255.0	0.061
30	7.06	32.85	7.10	1.60	25.74	30	7.06	32.85	7.10	1.60	25.74	226.0	0.085
49	5.05	32.98	6.78	2.15	26.09	50	4.79	32.99	6.74	2.16	26.13	189.1	0.127
74	3.98	33.22	5.73	2.42	26.39	75	3.98	33.27	5.72	2.42	26.43	159.9	0.170
98	3.96	33.62	3.32	2.81	26.72	100	3.98	33.63	3.12	2.81	26.72	133.0	0.208
147	4.05	33.86	1.36	2.93	26.90	150	4.07	33.87	1.31	2.93	26.90	116.0	0.271
193	4.00	33.95	0.78	3.21u	26.97	200	4.00	33.95	0.86	3.11	26.97	109.0	0.328
196	3.98	33.93	0.95	3.01u	26.96	250	4.00	34.02	0.71	3.20	27.03	104.0	0.382
290	4.00	-	0.62	3.23	-	300	4.00	34.07	0.59	3.23	27.07	100.0	0.434
479	3.62	34.20	0.41	3.27	27.21	400	3.84	34.15	0.45	3.25	27.15	92.5	0.532
720	3.23	34.31	0.40	3.15	27.34	500	3.60	34.21	0.41	3.27	27.22	85.8	0.624
966	2.81	34.42	0.47	3.30	27.46	600	3.42	34.26	0.41	3.20	27.28	80.7	0.711
1460	2.17	34.52	0.86	3.01	27.60	700	3.28	34.30	0.41	3.15	27.32	76.0	0.794
1960	1.85	34.60	1.52	3.22	27.68	800	3.10	34.35	0.44	3.20	27.38	70.7	0.873
						1000	2.79	34.43	0.48	3.28	27.47	62.0	1.015
						1200	2.48	34.48	0.60	3.12	27.54		
						1500	2.12	34.52	0.91	3.01	27.59		
						2000	(1.83)	(34.61)	(1.59)	(3.25)	(27.70)		

UW

NORPAC

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-28 BROWN BEAR; August 22, 1955; 2233 GCT; 55°06'N, 150°32'W; sounding, 2212 fm; wind, 210°, force 12 kt; weather, fog; sea, slight; visibility, 4; barometer, 30.15 in; clouds, 6, amt, 8; air temperature dry 56°, wet 55°.

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	12.06	32.48	6.31	0.93	24.65	0	12.06	32.48	6.31	0.93	24.65	330.1	0.000
10	11.94	32.48	6.37	1.48	24.67	10	11.94	32.48	6.37	1.48	24.67	328.9	0.033
20	11.55	32.49	6.41	1.04	24.75	20	11.55	32.49	6.41	1.04	24.75	320.5	0.065
29	9.68	32.57	6.63	1.19	25.13	30	9.12	32.64	6.68	1.21	25.28	270.0	0.095
49	5.24	32.94	6.78	2.03	26.04	50	4.98	32.95	6.78	2.08	26.18	194.0	0.141
73	4.05	33.09	6.38	2.36	26.28	75	4.06	33.11	6.35	2.37	26.29	172.8	0.187
98	3.95	33.45	4.24	-	26.58	100	3.97	33.48	3.98	2.61	26.60	144.0	0.228
146	4.21	33.86	1.49	2.99	26.88	150	4.21	33.87	1.47	3.00	26.89	117.0	0.294
177	4.18	33.88	1.28	3.09	26.89	200	4.23	33.97	0.81	3.15	26.96	109.8	0.352
195	4.21	34.02r	0.83	3.50u	27.01	250	4.10	34.03	0.66	3.25	27.02	104.0	0.405
260	4.09	34.04	0.65	3.25	27.03	300	3.98	34.07	0.58	3.28	27.07	99.7	0.457
428	3.72	34.15	0.41	3.29	27.16	400	3.78	34.13	0.44	3.30	27.14	93.0	0.556
646	3.33	34.30	0.38	3.34	27.32	500	3.62	34.20	0.39	3.30	27.21	86.6	0.649
867	2.90	34.38	0.43	3.42	27.42	600	3.44	34.27	0.37	3.32	27.28	79.9	0.736
1319	2.31	34.52	0.72	3.15	27.59	700	3.25	34.32	0.38	3.35	27.34	74.2	0.818
1793	1.95	34.59	1.28	3.31	27.67	800	3.05	34.36	0.43	3.41	27.39	69.0	0.895
2273	1.74	34.63	2.06	3.09	27.71	1000	2.70	34.43	0.49	3.33	27.47	61.0	1.035
						1200	2.44	34.49	0.63	3.19	27.55		
						1500	2.16	34.56	0.91	3.19	27.63		
						2000	1.88	34.61	1.61	3.24	27.69		

110-29 BROWN BEAR; August 23, 1955; 0740 GCT; 55°44'N, 151°08'W; sounding, 2637 fm; wind, 170°, force 12 kt; weather, partly cloudy; sea, slight; visibility, 4; barometer, 30.08 in; clouds, 6, amt, 2; air temperature, dry 55°, wet 54°.

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	12.25	32.35	6.20	0.73	24.51	0	12.25	32.35	6.20	0.73	24.51	343.2	0.000
10	12.27	32.35	6.40	0.61	24.51	10	12.27	32.35	6.40	0.61	24.51	343.3	0.034
20	11.62	32.40	6.56	0.66	24.67	20	11.62	32.40	6.56	0.66	24.67	329.0	0.068
29	8.10	32.68	6.75	1.36	25.46	30	8.05	32.77	6.76	1.40	25.54	245.4	0.097
49	5.66	32.91	6.91	1.82	26.97	50	5.59	32.92	6.87	1.85	25.99	202.8	0.142
73	4.85	33.01	6.20	2.14	26.14	75	4.83	33.02	6.16	2.15	26.15	187.3	0.190
98	4.12	33.29	5.47	2.55	26.43	100	4.13	33.35	5.26	2.55	26.48	155.3	0.234
141	4.96r	33.78	2.20	2.53	26.74	150	4.41	33.81	1.90	2.54	26.82	123.5	0.305
180	4.56r	33.90	1.38u	3.11	26.87	200	4.26	33.95	1.06	3.14	26.94	111.6	0.365
186	4.29	33.93	1.14	3.11	26.92	250	4.14	34.00	0.75	3.19	27.00	106.7	0.420
280	4.08	34.03	0.60	3.23	27.03	300	4.03	34.04	0.56	3.24	27.04	103.0	0.473
471	3.77	34.18	0.43	3.07	27.18	400	3.91	34.13	0.45	3.16	27.12	94.7	0.575
714	3.26	34.35	0.35	3.30	27.36	500	3.71	34.20	0.43	3.07	27.20	87.3	0.670
957	2.86	34.39	0.34	3.20	27.43	600	3.51	34.28	0.37	3.14	27.28	79.3	0.757
1443	2.22	34.52	0.78	3.10	27.59	700	3.30	34.34	0.35	3.28	27.35	73.2	0.838
1939	1.88	34.59	1.49	3.34	27.67	800	3.12	34.37	0.35	3.28	27.39	69.0	0.915
						1000	2.81	34.41	0.36	3.19	27.45	63.8	1.058
						1200	2.52	34.46	0.48	3.12	27.52		
						1500	2.19	34.53	0.87	3.11	27.60		
						2000	(1.87)	(34.60)	(1.58)	(3.37)	(27.68)		

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

BROWN BEAR; August 23, 1955; 1541 GCT; 56°16'N, 151°32'W; sounding, 2857 fm; wind, 165°, force 25 kt; weather, overcast; sea, moderate; visibility, 4; barometer, 29.90 in; clouds, 6, amt, 8; air temperature, dry 55°, wet 54°. 110-30

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	12.42	32.29	6.97	0.66	24.43	0	12.42	32.29	6.97	0.66	24.43	351.1	0.000
9	12.44	32.29	6.34	0.57	24.43	10	12.44	32.29	6.35	0.57	24.43	350.9	0.035
18	11.59	32.33	6.36	0.68	24.61	20	10.50	32.28	6.50	0.72	24.77	318.3	0.068
27	7.76	32.49	6.74	1.05	25.37	30	7.47	32.52	6.72	1.17	25.43	256.0	0.097
45	6.29	32.64	6.62	1.55	25.67	50	5.94	32.72	6.54	1.62	25.78	222.0	0.145
68	5.11	32.88	6.10	1.80	26.00	75	5.04	32.98	5.82	1.88	26.09	193.0	0.197
90	4.95	33.13	5.07	2.08	26.23	100	4.93	33.26	4.73	2.17	26.32	170.7	0.243
125	4.99	33.56	3.34	2.33	26.56	150	5.16	33.80	2.24	2.53	26.73	132.2	0.320
131	5.12	33.76	2.56	2.43	26.70	200	4.62	33.87	1.72	2.73	26.84	121.3	0.384
135	5.29	-	-	-	-	250	4.38	33.94	1.50	2.86	26.92	113.0	0.444
180	4.78	33.85	1.78	2.58u	26.81	300	4.23	33.99	1.37	2.96	26.98	108.3	0.500
188	4.72	33.86	1.86	2.75u	26.83	400	4.08	34.08	1.13	3.11	27.07	100.2	0.608
321	4.18	34.02	1.33a)	3.01	27.01	500	3.95	34.16	0.92	3.14	27.14	92.7	0.708
526	3.87	33.93r	0.85a)	3.15	26.97	600	3.73	34.23	0.74	3.15	27.22	85.5	0.801
860u	3.16	34.32	-	3.18	27.35	700	3.54	34.28	0.60	3.15	27.28	79.8	0.890
1097	2.85	34.39	0.44	3.09	27.43	800	3.35	34.32	0.49	3.14	27.33	75.1	0.972
1475	2.33	34.48	0.71	3.09	27.55	1000	3.02	34.37	0.43	3.11	27.40	68.5	1.127
1866	1.93	34.58	1.34	2.98	27.66	1200	2.71	34.42	0.50	3.10	27.47		
						1500	2.31	34.49	0.75	3.09	27.56		
						2000	(1.80)	(34.60)	(3.26)	(2.89)	(27.69)		

BROWN BEAR; August 23, 1955; 2134 GCT; 56°28'N, 151°59'W; sounding, 1100 fm; wind, 180°, force 28 kt; weather, intermittent drizzle; sea, very rough; visibility, 5; barometer, 29.79 in; clouds, 5, amt, 9; air temperature, dry 55°, wet 54°. 110-31

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	11.01	32.05	5.91	0.70	24.50	0	11.01	32.05	5.91	0.70	24.50	343.9	0.000
10	11.04	32.05	5.02	0.65	24.50	10	11.04	32.05	5.02	0.65	24.50	344.1	0.034
19	10.88	32.07	5.56	0.66	24.54	20	10.29	32.30	5.57	0.66	24.82	313.4	0.067
29	7.84	32.48	-	1.33	25.34	30	7.47	32.49	5.47	1.31	25.40	266.0	0.096
48	6.13	32.63	5.01b)	1.71	25.69	50	6.00	32.67	4.92	1.77	25.74	226.0	0.146
72	5.36	32.96	4.44b)	2.31	26.04	75	5.33	32.99	4.42	2.32	26.07	194.9	0.198
96	5.21	33.18	4.21	2.47	26.22	100	5.23	33.24	3.98	2.50	26.27	175.2	0.245
144	5.34	33.58	2.92	2.76	26.53	150	5.30	33.62	2.88	2.77	26.57	147.3	0.327
192	5.03	33.79	2.25	2.64u	26.74	200	5.03	33.83	2.16	2.85	26.77	128.9	0.397
195	5.07	33.82	2.18	2.84	26.76	250	4.68	33.90	1.44	3.04	26.86	119.8	0.460
294	4.41	33.91	1.22	3.23	26.90	300	4.39	33.91	1.20	3.23	26.90	115.7	0.520
489	4.01	34.09	0.57	3.20	27.08	400	4.06	34.02	0.83	3.22	27.02	104.7	0.634
726	3.54	34.21	0.37	3.20	27.22	500	4.01	34.10	0.57	3.20	27.09	98.0	0.739
972	3.13	34.34	0.39	3.34	27.37	600	3.88	34.15	0.45	3.19	27.14	92.9	0.840
1466	2.34	34.48	0.74	3.29	27.55	700	3.62	34.20	0.38	3.19	27.21	86.8	0.934
1862	1.99	34.55	1.24	3.34	27.63	800	3.42	34.26	0.37	3.24	27.28	80.5	1.025
						1000	3.09	34.35	0.40	3.34	27.38	70.3	1.189
						1200	2.73	34.42	0.53	3.33	27.46		
						1500	2.35	34.49	0.75	3.28	27.56		

BROWN BEAR; August 24, 1955; 0113 GCT; 56°32'N, 152°07'W; sounding, 100 fm; wind, 180°, force 22 kt; weather, intermittent drizzle; sea, very rough; visibility, 5; barometer, 29.72 in; clouds, 5, amt, 9; air temperature, dry 54°, wet 54°. 110-32

Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
0	10.82	32.03	6.60	0.67	24.52	0	10.82	32.03	6.60	0.67	24.52	342.0	0.000
10	10.78	32.03	6.62	0.76	24.53	10	10.78	32.03	6.62	0.76	24.53	340.6	0.034
20	6.70	32.37	5.51	1.77	25.42	20	6.70	32.37	5.51	1.77	25.42	257.3	0.064
29	6.37	32.42	5.30	1.88	25.49	30	6.29	32.45	5.24	1.91	25.53	246.3	0.089
49	5.95	32.63	5.01	2.15	25.71	50	5.94	32.63	5.00	2.16	25.71	228.4	0.137
73	5.75	32.75	4.85	2.22	25.83	75	5.73	32.76	4.84	2.23	25.84	216.7	0.192
98	5.54	32.92	4.69	2.37	25.99								

a) These two values were interchanged from the original data.
b) These two values were interchanged from the original data.

UW NORPAC

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

110-33 BROWN BEAR; August 24, 1955; 0624 GCT; 57°08'N, 151°56'W; sounding, 39 fm; wind, 228°, force 16 kt; weather, drizzle; sea, moderate; visibility, 4; barometer, 29.67 in; clouds, 5, amt, 8; air temperature, dry 53°, wet 53°.

0	10.71	32.06	6.74	0.84	24.56	0	10.71	32.06	6.74	0.84	24.56	337.8	0.000
10	10.72	32.05	6.79	0.82	24.55	10	10.72	32.05	6.79	0.82	24.55	339.0	0.034
20	9.75	32.10	6.65	0.84	24.75	20	9.75	32.10	6.65	0.84	24.75	319.8	0.067
30	8.20	32.13	6.16	1.44	25.01	30	8.20	32.13	6.16	1.44	25.01	295.2	0.098
50	7.31	32.19	5.82	1.76	25.19	50	7.31	32.19	5.82	1.76	25.19	278.2	0.155
60	7.17	32.23	5.77	1.80	25.24								

110-34 BROWN BEAR; August 24, 1955; 1056 GCT; 57°36'N, 151°48'W; sounding, 89 fm; wind, 265°, force 24 kt; weather, sky obscured; sea, rough; visibility, 5; barometer, 29.60 in; clouds, 5, amt, 9; air temperature, dry 53°, wet 53°.

0	9.17	31.99	4.77	1.19	24.76	0	9.17	31.99	4.77	1.19	24.76	319.3	0.000
10	9.12	32.00	3.88	1.18	24.78	10	9.12	32.00	3.88	1.18	24.78	317.7	0.032
19	8.23	32.09	4.21	1.45	24.98	20	8.22	32.09	4.30	1.49	24.98	298.8	0.063
29	8.15	32.09	5.31	1.65	24.99	30	8.13	32.09	5.36	1.65	25.00	297.3	0.092
48	7.83	32.14	5.60	1.50	25.08	50	7.79	32.16	5.58	1.50	25.10	286.8	0.151
73	6.99	32.29	4.40	1.84	25.31	75	6.94	32.31	4.40	1.86	25.33	264.8	0.220
97	6.66	32.39	4.83	2.03	25.44	100	6.64	32.40	4.84	2.06	25.45	254.6	0.286
117	6.53	32.41	4.89	2.20	25.46								

110-35 BROWN BEAR; August 25, 1955; 0758 GCT; 58°12'N, 151°16'W; sounding, 85 fm; wind, 250°, force 24 kt; weather, overcast; sea, rough; visibility, 5; barometer, 29.52 in; clouds, 5, amt, 9; air temperature, dry 50°, wet 47°.

0	9.78	31.64	6.05	0.81	24.39	0	9.78	31.64	6.05	0.81	24.39	354.3	0.000
10	9.84	31.73	4.45	0.83	24.45	10	9.84	31.73	4.45	0.83	24.45	348.9	0.035
20	9.55	31.89	2.88	0.82	24.62	20	9.55	31.89	2.88	0.82	24.62	332.0	0.069
29	9.46	31.91	2.72	–	24.65	30	9.43	31.92	2.73	–	24.66	328.0	0.102
48	8.36	32.04	3.60	–	24.93	50	8.15	32.06	3.62	–	24.97	299.0	0.165
73	6.95	32.23	3.67	–	25.27	75	6.93	32.25	3.67	–	25.29	269.0	0.236
97	6.81	32.37	3.60	–	25.40								

110-36 BROWN BEAR; August 25, 1955; 1526 GCT; 58°45'N, 152°16'W; sounding, 70 fm; wind, 290°, force 20 kt; weather, missing; sea, moderate; visibility, 8; barometer, 29.54 in; clouds, missing; air temperature, dry 48°, wet 46°.

0	8.64	31.27	6.28	–	24.28	0	8.64	31.27	6.28	–	24.28	365.4	0.000
10	8.66	31.31	6.36	–	24.31	10	8.66	31.31	6.36	–	24.31	362.6	0.036
20	8.43	31.47	6.22	–	24.46	20	8.43	31.47	6.22	–	24.46	347.5	0.072
29	8.28	31.52	6.13	–	24.53	30	8.26	31.52	6.12	–	24.53	341.4	0.106
48	7.86	31.66	5.99	–	24.70	50	7.76	31.69	5.98	–	24.74	322.0	0.173
73	7.20	31.91	5.77	1.68	24.99	75	7.18	31.92	5.75	1.69	25.00	297.2	0.250
97	6.92	32.07	5.34	1.75	25.14								

110-37 BROWN BEAR; August 25, 1955; 1855 GCT; 58°47'N, 152°50'W; sounding, 94 fm; wind, 290°, force 21 kt; weather, partly cloudy; sea, rough; visibility, 8; barometer, 29.59 in; clouds, 6, amt, 2; air temperature, dry 47°, wet 44°.

0	10.15	30.44	6.57	0.99	23.40	0	10.15	30.44	6.57	0.99	23.40	449.4	0.000
9	10.15	30.47	6.59	0.95	23.42	10	10.11	30.70	6.59	1.10	23.61	429.6	0.044
18	8.77	31.40	6.26	1.38	24.36	20	8.68	31.46	6.26	1.38	24.42	351.7	0.083
27	8.40	31.52	6.25	1.25	24.51	30	8.24	31.54	6.24	1.26	24.55	339.7	0.118
44	7.76	31.68	6.19	1.49	24.64	50	7.66	31.72	6.14	1.58	24.77	318.4	0.183
67	7.39	31.85	6.04	1.68	24.91	75	7.25	31.91	5.96	1.72	24.98	298.8	0.260
89	7.10	31.97	5.80	1.75	25.05	100	6.92	32.05	5.67	1.79	25.13	284.2	0.333
133	6.09	32.32	5.19	1.87	25.45								

OBSERVED					COMP	INTERPOLATED					COMPUTED			UW
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD	NORPAC
m	°C	‰	ml/L	μg at/L	g/L	m	°C	‰	ml/L	μg at/L	g/L	10^{-5} cm^3/g	dyn. m	

BROWN BEAR; August 26, 1955; 0017 GCT; 58°31'N, 153°35'W; sounding, 70 fm; wind, 260°, force 20 kt; weather, partly cloudy; sea, rough; visibility, 9; barometer, 29.71 in; clouds, 8, amt, 2; air temperature, dry 50°, wet 48°. 110-38A

0	9.54	30.56	6.37	1.29	23.59	0	9.54	30.56	6.37	1.29	23.59	431.4	0.000
10	9.54	30.59	6.43	1.25	23.61	10	9.54	30.59	6.43	1.25	23.61	429.5	0.043
20	9.51	30.68	6.47	1.31	23.69	20	9.51	30.68	6.47	1.31	23.69	421.9	0.086
29	9.00	31.45	6.64	1.18	24.37	30	8.90	31.56	6.63	1.20	24.47	347.5	0.124
48	7.77	31.80	6.12	1.55	24.82	50	7.70	31.80	6.10	1.60	24.83	313.2	0.190
77	7.09	31.92	6.05	1.83	25.01	75	7.12	31.92	6.05	1.82	25.00	297.0	0.266
106	6.52	32.12	5.71	1.97	25.23	100	6.59	32.06	5.80	1.94	25.17	280.8	0.341

BROWN BEAR; August 26, 1955; 0139 GCT; 58°27'N, 153°23'W; sounding, 112 fm; wind, 265°, force 28 kt; weather, partly cloudy; sea, rough; visibility, 9; barometer, 29.72 in; clouds, 8, amt, 2; air temperature, dry 50°, wet 48°. 110-38B

0	9.99	30.68	6.60	0.87	23.61	0	9.99	30.68	6.60	0.87	23.61	429.5	0.000
10	9.99	30.70	6.69	0.95	23.62	10	9.99	30.70	6.69	0.95	23.62	428.6	0.043
19	9.79	30.92	6.61	1.00	23.83	20	9.67	31.10	6.60	1.01	23.99	393.2	0.084
28	8.76	31.38	6.50	1.09	24.34	30	8.50	31.49	6.46	1.13	24.47	347.5	0.121
47	7.74	31.74	6.25	1.42	24.78	50	7.63	31.79	6.22	1.45	24.83	313.2	0.187
71	7.11	31.92	6.04	1.61	25.01	75	7.05	31.94	6.01	1.65	25.03	294.1	0.263
95	6.80	32.00	5.85	1.83	25.11	100	6.60	32.03	5.80	1.87	25.15	282.6	0.337
133	5.57	32.30	5.42	2.04	25.49	150	5.23	32.80	4.24	2.24	25.93	208.6	0.461
171	4.79	33.17	2.67	3.00	26.27								

BROWN BEAR; August 26, 1955; 0322 GCT; 58°21'N, 153°10'W; sounding, 110 fm; wind, 250°, force 17 kt; weather, partly cloudy; sea, rough; visibility, 9; barometer, 29.73 in; clouds, 8, amt, 2; air temperature, dry 49°, wet 48°. 110-38C

0	10.64	30.61	6.65	0.78	23.45	0	10.64	30.61	6.65	0.78	23.45	444.8	0.000
10	10.43	30.90	6.73	0.92	23.71	10	10.43	30.90	6.73	0.92	23.71	419.9	0.043
19	9.32	31.31	6.60	1.03	24.21	20	8.94	31.36	6.53	1.06	24.30	363.6	0.082
29	8.32	31.54	6.50	1.22	24.54	30	8.28	31.56	6.47	1.24	24.56	338.9	0.118
48	7.40	31.80	6.27	1.52	24.87	50	7.34	31.82	6.25	1.54	24.89	307.4	0.182
73	7.00	31.95	6.03	1.68	25.04	75	6.94	31.96	6.04	1.70	25.06	291.2	0.257
97	6.28	32.03	6.03	1.78	25.19	100	6.22	32.05	6.03	1.80	25.22	276.0	0.330
146	5.53	32.31	5.29	2.10	25.51	150	5.49	32.36	5.04	2.16	25.54	245.6	0.461
194	4.79	33.12	2.77	3.15	26.23								

BROWN BEAR; August 26, 1955; 1221 GCT; 57°57'N, 154°18'W; sounding, 122 fm; wind, 240°, force 14 kt; weather, overcast; sea, rough; visibility, 7; barometer, 29.80 in; clouds, 8, amt, 8; air temperature, dry 49°, wet 46°. 110-39

0	10.50	30.06	6.52	0.84	23.05	0	10.50	30.06	6.52	0.84	23.05	483.0	0.000
10	10.53	30.07	6.52	0.81	23.05	10	10.53	30.07	6.52	0.81	23.05	483.0	0.048
19	8.16	31.65	6.43	1.17	24.65	20	8.11	31.72	6.33	1.21	24.71	324.5	0.089
29	7.87	31.80	6.12	1.32	24.81	30	7.70	31.82	6.12	1.35	24.85	311.2	0.120
48	7.12	31.89	6.12	1.54	24.98	50	7.09	31.90	6.10	1.57	24.99	297.9	0.181
73	6.82	32.01	5.96	1.69	25.12	75	6.76	32.02	5.96	1.70	25.13	284.6	0.254
97	5.93	32.09	6.04	1.78	25.29	100	5.85	32.10	6.01	1.82	25.30	268.4	0.325
145	4.77	32.60	4.59	2.41	25.82	150	4.77	32.74	4.36	2.46	25.92	209.5	0.446
194	4.92	33.31	2.78	2.86	26.36	200	4.91	33.33	2.73	2.88	26.38	165.8	0.542
213	4.89	33.38	2.65	2.94	26.42								

UW
NORPAC

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-40 BROWN BEAR; August 26, 1955; 2030 GCT; 57°28'N, 155°10'W; sounding, 130 fm; wind, 180°, force 20 kt; weather, intermittent drizzle; sea, moderate; visibility, 5; barometer, 29.57 in; clouds, 0, amt, 9; air temperature, dry 52°, wet 52°.

0	10.71	30.35	6.52	0.64	23.24	0	10.71	30.35	6.52	0.64	23.24	464.9	0.000
8	10.70	30.35	6.47	0.66	23.24	10	10.74	30.35	6.46	0.65	23.23	465.8	0.046
15	10.78	30.98	6.41	0.63	23.71	20	10.70	31.47	6.28	0.68	24.11	381.7	0.089
23	10.52	31.74	6.18	0.78	24.35	30	9.70	31.85	6.09	0.95	24.57	338.0	0.125
38	9.32	31.89	6.08	1.13	24.66	50	6.99	31.91	6.18	1.41	25.01	296.0	0.188
57	6.56	31.92	6.19	1.50	25.07	75	6.00	32.00	5.96	1.67	25.21	276.9	0.260
76	6.00	32.00	5.97	1.68	25.21	100	5.58	32.11	5.99	1.81	25.34	264.6	0.330
115	5.24	32.16	6.00	1.90	24.43	150	4.78	32.50	4.83	2.33	25.74	226.6	0.453
153	4.78	32.59	4.66	2.40	25.81								
176	4.78	32.95	3.58	2.68	26.10								

110-42 BROWN BEAR; August 29, 1955; 0611 GCT; 55°41'N, 155°11'W; sounding, 210 fm; wind, 305°, force 12 kt; weather, partly cloudy; sea, slight; visibility, 8; barometer, 30.04 in; clouds, 1, 8, amt, 2; air temperature, dry 50°, wet 47°.

0	9.84	32.14	6.81	0.78	24.77	0	9.84	32.14	6.81	0.78	24.77	317.3	0.000
10	9.84	32.13	6.90	0.80	24.76	10	9.84	32.13	6.90	0.80	24.76	318.3	0.032
19	9.48	32.12	6.54	0.90	24.81	20	9.38	32.12	6.54	0.92	24.83	312.0	0.063
29	8.81	32.15	6.54	1.13	24.94	30	8.38	32.15	6.53	1.20	25.00	295.3	0.094
48	6.56	32.45	5.45	1.83	25.49	50	6.48	32.47	5.39	1.87	25.52	247.0	0.148
73	5.95	32.65	5.14	2.07	25.73	75	5.90	32.66	5.13	2.07	25.74	226.0	0.207
97	5.39	32.79	5.30	2.13	25.90	100	5.36	32.83	5.29	2.14	25.94	207.0	0.262
146	5.27	33.38	3.75	2.51	26.37								

110-43 BROWN BEAR; August 29, 1955; 0945 GCT; 55°24'N, 155°12'W; sounding, 537 fm; wind, 295°, force 15 kt; weather, partly cloudy; sea, slight; visibility, 8; barometer, 30.06 in; clouds, 1, amt, 2; air temperature, dry 50°, wet 48°.

0	10.82	32.15	6.43	0.68	24.62	0	10.82	32.15	6.43	0.68	24.62	332.9	0.000
10	10.80	32.16	6.47	0.76	24.62	10	10.80	32.16	6.47	0.76	24.62	332.0	0.033
19	10.77	32.15	6.42	0.63	24.62	20	10.18	32.15	6.40	0.68	24.72	322.0	0.066
29	7.36	32.32	6.22	1.24	25.29	30	7.00	32.34	6.17	1.42	25.35	262.4	0.095
48	5.88	32.49	5.67	1.81	25.60	50	5.84	32.51	5.63	1.85	25.63	236.6	0.145
72	5.38	32.75	5.31	2.16	25.87	75	5.35	32.79	5.30	2.17	25.91	210.0	0.201
96	5.22	33.03	4.87	2.25	26.11	100	5.22	33.06	4.75	2.29	26.13	188.4	0.252
134	5.32	33.30	3.89	2.69	26.31	150	5.38	33.51	3.19	2.69	26.47	156.3	0.339
143	5.36	33.46	3.33	2.69	26.43	200	5.23	33.79	2.33	2.71	26.71	134.0	0.413
191	5.36	33.74	2.43	2.57u	26.65	250	4.79	33.92	1.64	2.73	26.87	119.2	0.477
217	4.97	33.86	2.11	3.14u	26.80	300	4.57	33.99	1.14	2.76	26.94	111.5	0.536
409	4.12	34.07	0.64	2.86	27.06	400	4.16	34.07	0.66	2.84	27.05	101.1	0.646
729	3.46	34.26	0.39	3.50	27.27	500	3.85	34.13	0.54	2.96	27.13	94.2	0.747
						600	3.62	34.19	0.45	3.11	27.20	87.0	0.843
						700	3.48	34.24	0.39	3.37	27.25	82.5	0.933

BROWN BEAR; August 29, 1955; 1518 GCT; 55°00'N, 155°11'W; sounding, 1560 fm; wind, 305°, force 9 kt; weather, partly cloudy; sea, smooth; visibility, 9; barometer, 30.10 in; clouds, 1, 8, amt, 1; air temperature, dry 49°, wet 47°. 110-44

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m
0	10.71	32.24	6.55	0.69	24.70	0	10.71	32.24	6.55	0.69	24.70	323.9	0.000
10	10.73	32.24	6.60	0.73	24.70	10	10.73	32.24	6.60	0.73	24.70	324.1	0.032
20	10.73	32.24	6.59	0.77	24.70	20	10.73	32.24	6.59	0.77	24.70	324.1	0.065
29	10.03	32.26	6.48	0.87	24.83	30	9.78	32.26	6.43	0.90	24.87	307.8	0.096
49	6.04	32.68	5.94	1.88	25.74	50	6.00	32.70	5.92	1.90	25.76	224.0	0.150
73	5.33	33.00	5.53	2.18	26.08	75	5.26	33.01	5.51	2.21	26.09	193.0	0.202
98	5.04	33.12	5.34	2.37	26.21	100	5.06	33.13	5.30	2.39	26.21	181.5	0.250
146	5.31	33.57	3.10	2.80	26.53	150	5.33	33.61	2.88	2.82	26.56	148.3	0.333
195	5.24u	33.78u	2.30u	2.97u	26.71	200	5.19	33.80	2.21	3.00	26.72	132.8	0.404
195	5.14u	33.80u	2.27	3.00u	26.73	250	4.77	33.88	1.70	3.12	26.84	122.0	0.469
291	4.49	33.93	1.34	3.19	26.90	300	4.46	33.94	1.30	3.20	26.92	114.6	0.530
485	3.98	34.11	0.57	3.41	27.10	400	4.18	34.04	0.78	3.33	27.02	103.9	0.643
725	3.48	34.26	0.40	3.55	27.27	500	3.92	34.12	0.57	3.42	27.11	95.6	0.747
967	3.05	34.36	0.43	3.55	27.40	600	3.70	34.19	0.47	3.49	27.19	88.0	0.843
1460	2.37	34.49	0.71	3.45	27.55	700	3.51	34.25	0.41	3.54	27.26	81.8	0.933
1955	1.98	34.57	1.32	3.33	27.65	800	3.34	34.29	0.40	3.56	27.31	77.2	1.018
2450	1.72	34.61	2.11	3.17	27.70	1000	2.99	34.37	0.45	3.55	27.41	67.5	1.176
						1200	2.67	34.43	0.52	3.50	27.48		
						1500	2.32	34.50	0.74	3.44	27.57		
						2000	1.94	34.58	1.40	3.32	27.66		
						2500	(1.71)	(34.61)	(2.20)	(3.16)	(27.70)		

BROWN BEAR; August 29, 1955; 2124 GCT; 54°37'N, 155°12'W; sounding, 2998 fm; wind, 360°, force 3 kt; weather, partly cloudy; sea, smooth; visibility, 9; barometer, 30.11 in; clouds, 1, amt, 2; air temperature, dry 52°, wet 49°. 110.45

0	10.85	32.20	6.65	0.82	24.64	0	10.85	32.20	6.65	0.82	24.64	329.0	0.000
10	10.41	32.19	6.70	0.82	24.71	10	10.41	32.19	6.70	0.82	24.71	323.4	0.033
19	10.37	32.20	6.63	0.77	24.72	20	10.37	32.21	6.63	0.77	24.73	320.9	0.065
29	7.36	32.50	6.66	1.37	25.42	30	7.21	32.52	6.64	1.47	25.46	252.8	0.094
48	5.95	32.74	6.32	1.88	25.80	50	5.81	32.77	6.10	1.98	25.84	216.8	0.140
72	5.30	33.00	4.52	2.41	26.08	75	5.28	33.04	4.46	2.43	26.11	190.7	0.191
97	5.24	33.27	3.89	2.56	26.30	100	5.25	33.30	3.76	2.59	26.32	170.9	0.238
145	5.35	33.62	2.89	2.80	26.57	150	5.33	33.64	2.79	2.82	26.58	146.2	0.318
193	5.15	33.83	2.13	2.93u	26.75	200	5.11	33.84	2.05	3.00	26.77	128.9	0.393
194	5.20	33.84	2.12	3.05u	26.75	250	4.73	33.90	1.57	3.14	26.86	120.2	0.461
290	4.44	33.94	1.32	3.24	26.92	300	4.41	33.95	1.25	3.27	26.93	113.0	0.521
485	3.97	34.11	0.58	3.48	27.10	400	4.14	34.04	0.83	3.42	27.03	103.8	0.633
728	3.48	34.23	0.41	-	27.24	500	3.91	34.12	0.55	3.49	27.12	95.3	0.736
976	3.06	34.34	0.39	3.52	27.37	600	3.72	34.18	0.45	3.52	27.18	88.9	0.834
1463	2.35	34.49	0.83	3.43	27.55	700	3.52	34.22	0.41	3.53	27.23	84.0	0.925
1951	1.95	34.58	1.40	3.37	27.66	800	3.34	34.27	0.39	3.53	27.29	78.8	1.012
						1000	3.02	34.35	0.40	3.51	27.39	69.8	1.174
						1200	2.68	34.42	0.55	3.47	27.47		
						1500	2.33	34.50	0.86	3.42	27.57		
						2000	(1.92)	(34.58)	1.15	(3.37)	(27.66)		

UW

NORPAC

OBSERVED						COMP
Z	T	S	O_2	PO_4-P	σ_t	
m	°C	‰	ml/L	µg at/L	g/L	

INTERPOLATED						COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-46

BROWN BEAR; August 30, 1955; 1115 GCT; 53°24'N, 155°20'W; sounding, 2401 fm; wind, 120°, force 12 kt; weather, cloudy; sea, slight; visibility, 9; barometer, 29.81 in; clouds, 4, amt, 6; air temperature, dry 51°, wet 48°.

0	11.23	32.57	6.34	1.18	24.87	0	11.23	32.57	6.34	1.18	24.87	309.4	0.000
9	11.25	32.57	6.33	1.18	24.86	10	11.24	32.57	6.33	1.19	24.86	309.5	0.031
18	11.24	32.57	6.27	1.24	24.86	20	11.24	32.57	6.27	1.24	24.86	309.5	0.062
28	11.24	32.57	6.25	1.25	24.86	30	10.83	32.58	6.25	1.27	24.95	294.8	0.092
46	6.33	32.77	7.19	1.71	25.78	50	5.00	32.80	7.17	1.82	25.96	206.0	0.142
69	3.94	32.95	6.92	2.21	26.19	75	3.80	33.02	6.47	2.34	26.25	177.2	0.190
92	3.53	33.29	5.23	2.65	26.49	100	3.70	33.49	4.65	2.80	26.63	140.9	0.231
130	4.09	33.83	1.41	3.35	26.86	150	4.10	33.89	1.08	3.45	26.91	114.8	0.296
138	4.10	33.85	1.30	3.49	26.88	200	4.06	34.01	0.50	3.23	27.01	105.2	0.352
184	4.06	33.99	0.58	3.22	26.99	250	3.97	34.07	0.39	3.27	27.07	99.5	0.403
194	4.06	34.00	0.52	3.23	27.00	300	3.89	34.11	0.39	3.33	27.11	95.8	0.453
322	3.81	34.13	0.39	3.35	27.13	400	3.70	34.18	0.39	3.34	27.18	88.9	0.547
486	3.54	34.23	0.39	3.32	27.24	500	3.51	34.24	0.39	3.33	27.25	82.8	0.637
650	3.21	34.31	0.40	3.47	27.34	600	3.31	34.29	0.40	3.42	27.31	77.2	0.719
1010	2.60	34.44	0.41	3.41	27.49	700	3.13	34.33	0.40	3.48	27.36	72.2	0.799
1384	2.18	34.52	0.91	3.14	27.60	800	2.96	34.37	0.41	3.48	27.41	67.5	0.874
1757	1.91	34.59	1.51	3.27	27.67	1000	2.62	34.44	0.43	3.42	27.49	60.0	1.011
						1200	2.35	34.48	0.65	3.27	27.55		
						1500	2.09	34.54	1.09	3.15	27.61		

110-47

BROWN BEAR; August 31, 1955; 2107 GCT; 54°03'N, 157°47'W; sounding, 3003 fm; wind, 050°, force 9 kt; weather, cloudy; sea, high; visibility, 8; barometer, 28.64 in; clouds, 5, amt, 6; air temperature, dry 57°, wet 52°.

0	10.78	32.42	6.40	0.95	24.83	0	10.78	32.42	6.40	0.95	24.83	312.4	0.000
10	10.72	32.44	6.38	1.07	24.86	10	10.72	32.44	6.38	1.07	24.86	310.3	0.031
19	10.63	32.44	6.38	1.14	24.87	20	10.63	32.44	6.38	1.14	24.87	308.8	0.062
29	10.63	32.43	6.29	1.00	24.86	30	10.60	32.43	6.44	1.01	24.86	308.8	0.093
48	4.59	32.89	7.10	1.91	26.07	50	4.19	32.90	7.09	1.98	26.12	189.4	0.143
73	3.56	33.08	6.40	2.36	26.32	75	3.57	33.09	6.33	2.37	26.32	169.4	0.188
97	3.63	33.42	4.30	2.81	26.59	100	3.66	33.57	3.95	2.89	26.70	134.6	0.227
145	4.11	33.87	1.08	3.44	26.90	150	4.12	33.88	1.01	3.45	26.90	115.3	0.290
192	4.08	33.96	0.62	3.01u	26.97	200	4.04	33.99	0.56	3.46	27.00	106.7	0.347
193	4.05	34.00	0.63	3.46	27.01	250	3.93	34.06	0.40	3.46	27.05	100.0	0.398
290	3.87	34.09	0.35	3.46	27.09	300	3.84	34.10	0.35	3.46	27.11	96.4	0.448
482	3.56	34.22	0.35	3.35	27.23	400	3.69	34.17	0.35	3.39	27.17	89.5	0.543
725	3.16	34.33	0.32	3.26	27.35	500	3.57	34.23	0.34	3.34	27.24	83.8	0.633
939	2.81	34.42	0.59	3.56	27.46	600	3.44	34.28	0.25	3.29	27.29	79.0	0.718
1428	2.23	34.51	0.92	3.36	27.59	700	3.27	34.32	0.31	3.26	27.34	74.3	0.800
1916	1.88	34.57	1.44	3.28	27.66	800	3.03	34.36	0.39	3.35	27.40	69.2	0.877
2404	1.70	34.63	2.07	3.13	27.71	1000	2.71	34.44	0.62	3.57	27.48	60.2	1.016
						1200	2.47	34.48	0.74	3.49	27.53		
						1500	2.20	34.52	1.00	3.32	27.60		
						2000	1.81	34.58	1.55	3.27	27.67		
						2500	(1.69)	(34.64)	(2.21)	(3.08)	(27.72)		

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

UW
NORPAC

BROWN BEAR; August 31, 1955; 1116 GCT; 54°19'N, 158°45'W; sounding, 1050 fm; wind, 085°, force 21 kt; weather, cloudy; sea, very rough; visibility, 7; barometer, 28.54 in; clouds, 8, amt, 6; air temperature, dry 50°, wet 50°. 110-48

0	10.77	32.22	6.34	0.77	24.67	0	10.77	32.22	6.34	0.77	24.67	326.8	0.000
10	10.80	32.22	6.23	0.79	24.67	10	10.80	32.22	6.23	0.79	24.67	327.4	0.033
19	10.78	32.22	6.20	0.72	24.67	20	10.78	32.22	6.19	0.71	24.67	327.0	0.065
29	10.42	32.23	6.19	0.70	24.74	30	9.98	32.24	6.18	0.70	24.83	312.0	0.097
48	5.19	32.88	5.85	2.14	25.99	50	5.07	32.92	5.73	2.21	26.04	187.8	0.148
72	4.87	33.20	4.91	2.51	26.28	75	4.88	33.25	4.74	2.61	26.52	170.8	0.194
96	5.20	33.76	2.42	2.88	26.69	100	5.22	33.78	2.42	2.88	26.70	134.3	0.233
127	5.14	-	2.36	2.87	-	150	4.95	33.85	2.05	2.88	26.80	126.3	0.300
184	4.58	33.90	1.58	3.09u	26.87	200	4.46	(33.90)	1.39	2.93	(26.88)	(117.3)	(0.362)
189	4.46	-	1.51	2.92	-	250	4.26	-	0.92	3.00	-		
192	4.55	33.88	1.49	2.81u	26.86	300	4.12	-	0.71	3.09	-		
318	4.09	-	0.66	3.10	-	400	3.94	-	0.66	3.20	-		
519	3.74	-	0.66	3.25	-	500	3.76	-	0.66	3.24	-		
909	3.00	-	0.60	3.46	-	600	3.55	-	0.65	3.29	-		
1475	2.27	-	0.88	3.45	-	700	3.37	-	0.64	3.35	-		
						800	3.18	-	0.63	3.40	-		
						1000	2.88	-	0.64	3.48	-		
						1200	2.60	-	0.72	3.48	-		
						1500	(2.22)	-	0.90	(3.44)	-		

BROWN BEAR; September 1, 1955; 1431 GCT; 54°34'N, 159°36'W; sounding, 50 fm; wind, 250°, force 12 kt; weather, drizzle; sea, slight; visibility, 6; barometer, 28.91 in; clouds, 8, amt, 8; air temperature, dry 49°, wet 48°. 110-49

0	9.38	32.05	6.59	0.90	24.77	0	9.38	32.05	6.59	0.90	24.77	318.0	0.000
10	9.33	32.11	6.66	0.86	24.83	10	9.33	32.11	6.66	0.86	24.83	312.8	0.032
19	9.20	32.11	6.61	0.90	24.85	20	9.20	32.11	6.60	0.91	24.85	310.6	0.063
29	9.19	32.12	6.55	0.95	24.86	30	9.17	32.12	6.54	0.98	24.86	308.8	0.094
49	6.29	32.14	6.12	1.68	25.27	50	6.10	32.14	6.04	1.73	25.30	267.0	0.151
58	5.65	32.20	5.91	1.86	25.41								

BROWN BEAR; September 2, 1955; 1905 GCT; 55°06'N, 160°21'W; sounding, 124 fm; wind, 160°, force 7 kt; weather, cloudy; sea, smooth; visibility, 8; barometer, 29.57 in; clouds, 0, amt, 6; air temperature, dry 48°, wet 47°. 110-50

0	8.63	31.53	6.56	1.15	24.48	0	8.63	31.53	6.56	1.15	24.48	346.0	0.000
10	8.62	31.53	6.93	1.11	24.48	10	8.62	31.53	6.93	1.11	24.48	345.8	0.035
19	8.42	31.56	6.81	1.28	24.54	20	7.98	31.59	6.78	1.34	24.62	332.0	0.068
29	7.63	31.68	6.60	1.44	24.75	30	7.54	31.69	6.57	1.47	24.77	317.3	0.101
48	7.13	31.74	6.53	1.63	24.86	50	7.03	31.74	6.52	1.66	24.88	308.1	0.164
73	6.26	31.75	6.50	1.79	24.98	75	6.27	31.75	6.48	1.79	24.98	298.0	0.239
97	6.16	31.76	6.44	1.86	24.99	100	6.17	31.76	6.42	1.87	24.99	295.7	0.315
146	5.85	31.79	6.36	1.93	25.06								

BROWN BEAR; September 3, 1955; 0537 GCT; 54°18'N, 161°20'W; sounding, 112 fm; wind, 210°, force 8 kt; weather, drizzle; sea, smooth; visibility, 6; barometer, 29.62 in; clouds, 0, amt, 8; air temperature, dry 46°, wet 46°. 110-51

0	9.09	31.74	6.87	0.52	24.58	0	9.09	31.74	6.87	0.52	24.58	337.0	0.000
10	9.11	31.74	6.87	0.47	24.58	10	9.11	31.74	6.87	0.47	24.58	337.4	0.034
19	8.94	31.77	6.78	0.59	24.62	20	8.50	31.88	6.72	1.16	24.77	318.0	0.066
29	5.77	32.01	6.25	1.45	25.24	30	5.57	32.02	6.26	1.48	25.28	270.4	0.096
48	4.95	32.10	6.16	1.73	25.40	50	4.95	32.10	6.15	1.74	25.41	258.0	0.149
72	4.97	32.20	5.89	1.86	25.48	75	4.97	32.22	5.86	1.87	25.50	249.2	0.212
97	5.01	32.37	5.52	2.03	25.61	100	5.01	32.40	5.47	2.06	25.64	236.0	0.274
145	5.01	32.91	4.04	2.45	26.04								

UW

NORPAC

OBSERVED						COMP
Z	T	S	O_2	PO_4-P	σ_t	
m	°C	‰	ml/L	µg at/L	g/L	

INTERPOLATED						COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-52 BROWN BEAR; September 3, 1955; 0910 GCT; 54°03'N, 161°19'W; sounding, 720 fm; wind, 335°, force 4 kt; weather, drizzle; sea, smooth; visibility, 6; barometer, 29.69 in; clouds, 0, amt, 8; air temperature, dry 46°, wet 46°.

0	9.75	32.09	6.61	0.68	24.75	0	9.75	32.09	6.61	0.68	24.75	320.0	0.000
10	9.70	32.13	6.59	0.80	24.78	10	9.70	32.13	6.59	0.80	24.78	316.2	0.032
19	9.28	32.18	6.56	0.95	24.89	20	9.00	32.20	6.55	0.96	24.95	300.0	0.063
29	7.17	32.39	6.05	1.31	25.36	30	7.00	32.40	6.03	1.40	25.40	258.5	0.090
48	5.70	32.60	5.64	1.83	25.72	50	5.65	32.63	5.61	1.87	25.75	225.2	0.139
73	5.25	32.96	5.07	2.12	26.06	75	5.22	32.97	5.02	2.13	26.06	195.3	0.191
97	5.10	33.30	3.52	2.48	26.33	100	5.10	33.35	3.23	2.50	26.38	165.4	0.237
146	5.28	33.74	2.07	2.66	26.66	150	5.26	33.75	2.04	2.66	26.67	136.5	0.314
188	4.84	33.82	1.86	2.39u	26.79	200	4.73	33.86	1.67	2.51	26.83	123.2	0.380
194	4.84	33.85	1.76	2.53	26.81	250	4.44	33.93	1.20	2.53	26.91	114.8	0.441
283	4.36	33.96	1.00	2.56	26.94	300	4.33	33.98	0.93	2.58	26.96	109.1	0.498
476	3.94	34.13	0.55	2.78	27.12	400	4.11	34.08	0.67	2.70	27.06	100.2	0.605
720	3.49	34.26	0.37	2.64	27.27	500	3.90	34.14	0.47	2.78	27.13	93.8	0.704
965	3.11	34.33	0.46	2.90	27.36	600	3.71	34.20	0.38	2.74	27.20	87.2	0.802
						700	3.53	34.25	0.37	2.66	27.26	81.9	0.892
						800	3.37	34.30	0.38	2.66	27.31	76.7	0.977
						1000	(3.06)	(34.33)	(0.48)	(2.97)	(27.37)	(71.7)	(1.148)

110-53 BROWN BEAR; September 3, 1955; 1924 GCT; 53°38'N, 161°28'W; sounding, 2407 fm; wind, 320°, force 13 kt; weather, cloudy; sea, smooth; visibility, 8; barometer, 29.88 in; clouds, 0, 1, 8, amt, 7; air temperature, dry 48°, wet 46°.

0	10.40	32.34	6.36	0.79	24.83	0	10.40	32.34	6.36	0.79	24.83	312.0	0.000
10	10.40	32.33	6.36	0.86	24.82	10	10.40	32.33	6.36	0.86	24.82	313.0	0.031
19	10.39	32.35	6.33	0.84	24.84	20	10.38	32.35	6.27	0.84	24.84	310.6	0.062
29	10.32	32.35	6.37	0.95	24.86	30	10.30	32.36	6.38	1.00	24.87	308.8	0.093
48	5.03	32.88	7.16	1.99	26.02	50	4.90	32.91	7.16	2.01	26.06	196.2	0.144
73	3.55	33.09	6.76	2.23	26.33	75	3.55	33.10	6.61	2.24	26.34	168.9	0.190
97	3.65	33.40	4.51	2.71	26.57	100	3.65	33.46	4.31	2.73	26.61	142.8	0.229
146	4.18	33.86	1.33	3.13	26.88	150	4.16	33.87	1.22	3.14	26.89	116.2	0.295
192	4.09	33.96	0.77	3.26u	26.97	200	4.08	33.98	0.50	3.17	26.99	107.7	0.352
194	4.08	33.97	0.60	3.08u	26.98	250	3.99	34.05	0.37	3.15	27.05	101.1	0.405
289	3.93	34.08	0.36	3.13	27.08	300	3.89	34.09	0.36	3.11	27.09	97.4	0.455
484	3.56	34.21	0.37	3.08	27.22	400	3.72	34.16	0.36	3.09	27.17	90.7	0.551
727	3.14	34.33	0.39	3.11	27.36	500	3.53	34.23	0.37	3.08	27.24	83.2	0.642
964	2.76	34.41	0.48	3.34	27.45	600	3.37	34.28	0.37	3.08	27.30	78.3	0.727
1454	2.20	34.54	0.95	3.12	27.61	700	3.20	34.32	0.39	3.10	27.35	74.0	0.807
1946	1.86	34.58	1.56	3.07	27.67	800	3.02	34.36	0.41	3.16	27.40	69.2	0.883
2436	1.69	34.64	2.88	3.02	27.72	1000	2.72	34.43	0.50	3.34	27.47	61.5	1.025
						1200	2.46	34.49	0.65	3.23	27.55		
						1500	2.15	34.55	0.99	3.10	27.62		
						2000	1.83	34.58	1.67	3.07	27.67		
						2500	(1.68)	(34.65)	(3.12)	(3.01)	(27.73)		

BROWN BEAR; September 4, 1955; 0603 GCT; 52°38'N, 161°14'W; sounding, 2548 fm; wind, 310°, force 13 kt; weather, cloudy; sea, smooth; visibility, 8; barometer, 30.02 in; clouds, 0, 6, 8, amt, 6; air temperature, dry 46°, wet 45°. 110-54

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	9.68	32.26	6.43	0.79	24.89	0	9.68	32.26	6.43	0.79	24.89	306.2	0.000
10	9.70	32.26	6.42	0.79	24.89	10	9.70	32.26	6.42	0.79	24.89	306.4	0.031
19	9.67	32.27	6.42	0.79	24.90	20	9.66	32.27	6.41	0.79	24.90	305.2	0.061
29	9.56	32.56	6.38	1.23	25.58	30	6.30	32.57	6.38	1.30	25.62	237.4	0.088
48	4.44	32.81	6.54	1.86	26.03	50	4.37	32.82	6.54	1.93	26.04	197.3	0.132
72	3.72	33.21	5.61	2.44	26.41	75	3.70	33.22	5.43	2.46	26.42	161.2	0.177
96	3.97	33.57	3.34	2.85	26.67	100	4.00	33.61	3.02	2.92	26.71	134.6	0.215
144	4.19	33.92	1.22	3.34	26.93	150	4.15	33.93	1.16	3.35	26.94	112.0	0.277
189	3.93	33.95	1.05	3.24u	26.99	200	3.96	33.97	0.78	3.31	26.99	107.2	0.333
192	4.06	33.96	0.71	3.41u	26.98	250	3.94	34.03	0.54	3.27	27.04	102.3	0.386
287	3.90	34.06	0.47	3.25	27.07	300	3.88	34.07	0.48	3.26	27.08	98.9	0.437
470	3.53	34.20	0.54	3.35	27.22	400	3.69	34.15	0.50	3.31	27.16	91.2	0.534
704	3.13	34.32	0.53	3.35	27.35	500	3.49	34.22	0.54	3.35	27.24	84.0	0.625
942	2.77	34.39	0.59	3.35	27.43	600	3.30	34.28	0.53	3.35	27.30	77.8	0.709
1421	2.20	34.52	0.93	3.24	27.59	700	3.13	34.32	0.54	3.35	27.35	73.3	0.789
1899	1.91	34.60	1.52	3.16	27.68	800	2.97	34.36	0.55	3.35	27.40	68.3	0.866
						1000	2.67	34.41	0.62	3.34	27.46	62.7	1.007
						1200	2.38	34.47	0.73	3.30	27.54		
						1500	2.12	34.54	1.01	3.23	27.61		
						2000	(1.84)	(34.61)	(1.68)	(3.14)	(27.69)		

BROWN BEAR; September 4, 1955; 1851 GCT; 50°58'N, 161°09'W; sounding, 2518 fm; wind, 280°, force 5 kt; weather, cloudy; sea, smooth; visibility, 8; barometer, 30.19 in; clouds, 4, amt, 7; air temperature, dry 47°, wet 45°. 110-55

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	10.22	32.35	6,52	0.93	24.87	0	10.22	32.35	6.52	0.93	24.87	309.1	0.000
10	10.22	32.36	6.48	1.07	24.88	10	10.22	32.36	6.48	1.07	24.88	308.4	0.031
19	10.22	32.35	6.41	0.95	24.87	20	10.21	32.35	6.42	0.94	24.88	308.3	0.062
29	10.19	32.35	6.45	0.92	24.88	30	10.18	32.35	6.55	0.92	24.88	307.7	0.092
48	5.45	32.75	7.22	1.83	25.87	50	5.35	32.75	7.22	1.84	25.88	212.8	0.145
73	4.69	32.78	7.18	1.93	25.97	75	4.68	32.79	7.17	1.93	25.98	203.0	0.197
97	3.77	32.93	6.64	2.11	26.19	100	3.74	33.16	6.38	2.13	26.36	166.3	0.244
146	4.13	33.74	2.51	2.78	26.79	150	4.13	33.75	2.22	2.80	26.81	125.2	0.318
192	4.03	33.94	1.32	3.29u	26.96	200	4.04	33.92	1.28	3.13	26.94	111.8	0.378
194	4.03	33.89	1.38	3.11	26.92	250	3.97	33.98	0.85	3.25	27.00	106.3	0.432
288	3.89	34.02	0.67	3.31	27.04	300	3.88	34.04	0.64	3.32	27.05	101.2	0.486
478	3.58	34.19	0.40	3.39	27.21	400	3.70	34.13	0.47	3.37	27.14	92.7	0.586
718	3.14	34.33	0.49	3.27	27.36	500	3.52	34.21	0.39	3.39	27.23	84.8	0.678
960	2.77	34.41	0.90	3.40	27.46	600	3.35	34.27	0.40	3.34	27.29	79.0	0.764
1450	2.26	34.52	0.83	3.29	27.59	700	3.18	34.32	0.47	3.27	27.35	73.6	0.835
1938	1.92	34.60	0.95	3.21	27.68	800	3.02	34.36	0.65	3.30	27.40	69.0	0.921
2248	1.76	34.63	1.40	3.19	27.72	1000	2.71	34.42	0.91	3.40	27.47	61.9	1.063
2426	1.70	34.63	2.14	3.48	27.72	1200	2.47	34.47	0.90	3.37	27.53		
2914	-	34.67	2.63	2.97	-	1500	2.22	34.53	0.85	3.29	27.60		
2919	1.59	34.66	2.64	2.94	27.75	2000	1.90	34.61	1.03	3.17	27.69		
3414	1.51	34.67	3.08	2.82	27.77	2500	1.70	34.64	2.22	3.45	27.72		
3419	1.50	34.68	3.05	2.84	27.78	3000	1.59	34.67	2.72	2.89	27.76		
3914	1.47	34.69	3.29	2.83	27.78	4000	(1.48)	(34.69)	(3.30)	(2.92)	(27.78)		
3919	1.48	34.69	3.34	2.95	27.78								

UW
NORPAC

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-56 BROWN BEAR; September 5, 1955; 1336 GCT; 51°02'N, 158°36'W; sounding, 2640 fm; wind, calm; weather, cloudy; sea, smooth; visibility, 7; barometer, 30.26 in; clouds, 4, amt, 7; air temperature, dry 49°, wet 46°.

0	10.18	32.52	6.46	1.25	25.01	0	10.18	32.52	6.46	1.25	25.01	295.7	0.000
10	10.19	32.52	6.45	1.26	25.01	10	10.19	32.52	6.45	1.26	25.01	295.9	0.030
19	10.08	32.51	6.43	1.33	25.02	20	10.10	32.51	6.43	1.35	25.02	294.9	0.059
29	9.92	32.53	6.42	1.29	25.06	30	9.91	32.57	6.46	1.29	25.09	287.5	0.088
48	4.71	32.75	7.12	1.76	25.95	50	4.68	32.75	7.12	1.78	25.95	206.0	0.138
73	4.32	32.79	7.03	1.93	26.02	75	4.24	32.79	7.02	1.94	26.03	198.6	0.188
97	3.91	32.84	6.79	2.12	26.10	100	3.93	32.85	5.68	2.18	26.11	191.1	0.238
146	4.17	33.76	2.59	2.99	26.80	150	4.19	33.78	2.51	3.01	26.81	123.5	0.318
192	4.14	33.90	1.53	3.21	26.91	200	4.13	33.91	1.42	3.20	26.93	113.2	0.378
194	4.16	33.87	1.60	3.18	26.90	250	4.01	34.01	0.87	3.27	27.02	104.9	0.433
288	3.94	34.05	0.72	3.29	27.06	300	3.92	34.06	0.69	3.31	27.07	100.0	0.485
481	3.63	34.19	0.44	3.33	27.20	400	3.77	34.14	0.53	3.33	27.14	92.3	0.584
723	3.17	34.31	0.40	3.41	27.25	500	3.60	34.20	0.43	3.34	27.21	86.3	0.677
967	2.79	34.42	0.46	3.33	27.46	600	3.40	34.25	0.40	3.37	27.27	81.0	0.765
1457	2.25	34.54	0.84	3.26	27.60	700	3.20	34.30	0.40	3.41	27.33	75.2	0.848
1947	1.94	34.63	1.40	3.26	27.70	800	3.04	34.35	0.43	3.41	27.39	70.2	0.925
						1000	2.72	34.43	0.49	3.32	27.47	61.4	1.068
						1200	2.47	34.49	0.62	3.27	27.54		
						1500	2.20	34.55	0.88	3.26	27.62		
						2000	(1.93)	(34.64)	(1.46)	(3.26)	(27.71)		

110-57 BROWN BEAR; September 6, 1955; 0156 GCT; 51°00'N, 156°04'W; sounding, 2643 fm; wind, calm; weather, cloudy; sea, calm; visibility 8; barometer, 30.31 in; clouds 4, amt 6; air temperature, dry 59°F, wet 53°F.

0	10.71	32.43	6.38	0.88	24.85	0	10.71	32.43	6.38	0.88	24.85	310.9	0.000
10	10.00	32.43	6.54	1.00	24.97	10	10.00	32.43	6.54	1.00	24.97	299.3	0.030
19	9.83	32.43	6.54	0.86	25.00	20	9.82	32.43	6.54	0.87	25.00	296.9	0.060
29	9.76	32.44	6.50	0.93	25.01	30	9.72	32.44	6.50	0.96	25.03	294.2	0.090
48	5.35	32.73	7.15	1.64	25.86	50	5.22	32.75	7.15	1.67	25.89	211.9	0.140
73	4.41	32.89	7.04	1.84	26.09	75	4.40	32.90	7.01	1.85	26.10	191.8	0.191
97	3.94	33.01	6.07	2.09	26.23	100	3.95	33.03	5.85	2.11	26.25	177.9	0.238
145	4.10	33.69	2.91	2.84	26.76	150	4.09	33.72	2.67	2.87	26.78	127.2	0.316
192	4.03	33.88	1.66	3.08	26.91	200	4.03	33.88	1.64	3.11	26.91	114.9	0.377
194	4.05	33.86	1.80	3.14	26.90	250	3.98	33.96	1.12	3.25	26.98	107.9	0.433
288	3.91	34.01	0.85	3.32	27.02	300	3.91	34.03	0.81	3.33	27.04	102.2	0.487
480	3.60	34.20	0.47	3.35	27.21	400	3.77	34.13	0.56	3.34	27.14	93.2	0.588
720	3.14	34.31	0.45	3.37	27.34	500	3.58	34.21	0.47	3.35	27.22	85.2	0.681
961	2.77	34.43	0.50	3.37	27.47	600	3.39	34.25	0.45	3.36	27.27	80.9	0.768
1448	2.25	34.52	0.87	3.33	27.59	700	3.19	34.30	0.45	3.36	27.33	75.2	0.851
1937	1.91	34.60	1.40	3.18	27.68	800	3.02	34.36	0.45	3.37	27.40	69.0	0.928
2427	1.71	34.63	2.03	3.20	27.72	1000	2.72	34.44	0.53	3.37	27.48	60.9	1.069
						1200	2.49	34.49	0.66	3.36	27.54		
						1500	2.20	34.53	0.93	3.32	27.60		
						2000	1.89	34.61	1.48	3.16	27.69		
						2500	(1.70)	(34.63)	(2.13)	(3.21)	(27.71)		

BROWN BEAR; September 6, 1955; 1603 GCT; 51°04'N, 153°23'W; sounding, 2633 fm; wind, 075°, force 8 kt; weather, partly cloudy; sea, smooth; visibility, 8; barometer, 30.35 in; clouds, 4, amt, 1; air temperature, dry 49°, wet 49°. 110-58

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	10.18	32.47	6.52	1.11	24.97	0	10.18	32.47	6.52	1.11	24.97	299.2	0.000
10	10.19	32.48	6.47	1.11	24.98	10	10.19	32.48	6.47	1.11	24.98	298.7	0.030
19	9.65	32.54	6.55	1.20	25.11	20	9.63	32.54	6.55	1.20	25.12	285.5	0.059
29	9.52	32.54	6.59	1.21	25.13	30	9.51	32.54	6.60	1.23	25.14	283.4	0.088
48	5.11	32.74	6.94	1.83	25.90	50	5.08	32.75	6.93	1.85	25.91	210.7	0.137
72	4.48	32.79	6.92	1.96	26.00	75	4.38	32.80	6.91	1.98	26.02	199.1	0.188
97	3.81	33.14	5.64	2.26	26.35	100	3.83	33.35	5.29	2.41	26.51	152.6	0.233
145	4.15	33.81	1.88	3.15	26.83	150	4.14	33.82	1.78	3.17	26.85	120.0	0.302
192	4.03	33.92	1.11	3.26	26.94	200	4.01	33.93	1.03	3.25	26.95	110.6	0.367
193	4.00	33.92	1.11	3.25	26.94	250	3.93	34.00	0.69	3.31	27.02	104.9	0.415
288	3.86	34.03	0.56	3.35	27.05	300	3.84	34.05	0.54	3.36	27.07	100.2	0.467
481	3.54	34.20	0.40	3.36	27.22	400	3.68	34.14	0.44	3.36	27.15	91.8	0.565
720	3.15	34.32	0.41	3.43	27.34	500	3.52	34.21	0.40	3.37	27.23	85.0	0.657
963	2.74	34.40	0.50	3.37	27.45	600	3.37	34.26	0.39	3.42	27.28	79.9	0.744
1447	2.24	34.52	0.83	3.28	27.59	700	3.19	34.31	0.40	3.43	27.34	76.1	0.827
1934	1.93	34.58	1.36	3.22	27.66	800	3.01	34.35	0.43	3.42	27.39	69.8	0.905
						1000	2.70	34.41	0.53	3.36	27.46	62.8	1.048
						1200	2.48	34.46	0.65	3.31	27.52		
						1500	2.20	34.53	0.88	3.27	27.60		
						2000	(1.90)	(34.58)	(1.41)	(3.22)	(27.66)		

BROWN BEAR; September 7, 1955; 0613 GCT; 51°00'N, 150°47'W; sounding, 2670 fm; wind, 090°, force 12 kt; weather, overcast; sea, slight; visibility, 8; barometer, 30.37 in; clouds, 4, amt, 8; air temperature, dry 51°, wet 49°. 110-59

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m
0	10.44	32.65	6.29	1.22	25.07	0	10.44	32.65	6.29	1.22	25.07	290.8	0.000
10	10.46	32.63	6.44	1.34	25.05	10	10.46	32.63	6.44	1.34	25.05	291.8	0.029
19	10.45	32.66	6.41	1.37	25.07	20	10.44	32.66	6.42	1.38	25.07	289.8	0.058
29	10.30	32.65	6.41	1.39	25.09	30	9.84	32.65	6.41	1.41	25.17	280.7	0.087
48	5.65	32.80	6.88	1.72	25.88	50	5.53	32.80	6.91	1.72	25.90	211.4	0.136
72	4.90	32.80	7.06	1.81	25.97	75	4.88	32.81	7.04	1.82	25.98	203.8	0.188
97	4.23	32.93	6.72	2.02	26.14	100	4.24	32.95	4.55	2.41	26.17	186.8	0.238
144	4.13	33.77	2.15	3.06	26.82	150	4.12	33.80	1.97	3.09	26.84	121.5	0.316
192	4.04u	33.93u	0.92u	3.24	26.95	200	4.06	33.94	0.86	3.27	26.96	110.2	0.321
193	4.03u	33.92u	0.99u	3.34u	26.95	250	3.98	34.00	0.58	3.33	27.01	105.0	0.329
288	3.89	34.04	0.49	3.34	27.06	300	3.88	34.05	0.49	3.34	27.06	100.2	0.481
477	3.54	34.20	0.55	3.35	27.22	400	3.64	34.14	0.50	3.35	27.16	91.1	0.580
716	3.13	34.32	0.54	3.33	27.35	500	3.51	34.21	0.54	3.35	27.23	84.9	0.672
953	2.77	34.42	0.71	3.32	27.46	600	3.39	34.26	0.55	3.35	27.28	80.0	0.758
1444	2.25	34.52	0.73	3.31	27.59	700	3.18	34.31	0.55	3.34	27.34	74.2	0.839
1934	1.91	34.60	1.24	3.21	27.68	800	2.99	34.36	0.62	3.33	27.40	68.6	0.917
2417	1.72	34.61	1.93	3.13	27.70	1000	2.70	34.43	0.71	3.32	27.47	61.2	1.056
						1200	2.44	34.47	0.67	3.33	27.53		
						1500	2.19	34.53	0.76	3.30	27.60		
						2000	1.89	34.61	1.32	3.21	27.69		
						2500	(1.71)	(34.61)	(2.11)	(3.11)	(27.70)		

UW NORPAC

OBSERVED						COMP
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	

INTERPOLATED					COMPUTED		
Z m	T °C	S ‰	O_2 ml/L	PO_4-P µg at/L	σ_t g/L	δ_T 10^{-5} cm^3/g	ΔD dyn. m

110-60 BROWN BEAR; September 7, 1955; 2140 GCT; 51°04'N, 148°11'W; sounding, 2470 fm; wind, 130°, force 16 kt; weather, overcast; sea, slight; visibility, 7; barometer, 30.39 in; clouds, 6, amt, 8; air temperature, dry 51°, wet 49°.

0	10.53	32.66	6.48	1.55	25.06	0	10.53	32.66	6.48	1.55	25.06	291.4	0.000
9	10.54	32.66	6.44	1.54	25.06	10	10.54	32.66	6.46	1.54	25.06	291.2	0.029
19	10.53	32.66	6.51	1.53	25.06	20	10.52	32.66	6.50	1.53	25.06	291.0	0.058
29	10.49	32.66	6.48	1.60	25.07	30	10.48	32.66	6.48	1.61	25.07	290.2	0.087
48	10.32	32.68	6.50	1.69	25.11	50	9.80	32.69	6.61	1.71	25.20	277.0	0.144
72	5.57	32.84	7.15	1.92	25.92	75	5.45	32.84	7.16	1.92	25.94	207.5	0.205
95	5.00	32.85	7.04	1.86	26.00	100	4.87	32.86	6.92	1.89	26.02	200.0	0.257
143	4.13	33.41	5.03	2.49	26.53	150	4.13	33.55	4.69	2.55	26.64	140.4	0.343
182	4.19	33.81	2.89	3.02u	26.84	200	4.11	33.83	2.45	3.01	26.86	119.2	0.409
191	4.16	33.81	2.76	2.86u	26.85	250	4.00	33.91	1.80	3.21	26.94	112.0	0.467
273	3.95	33.93	1.58	3.25	26.96	300	3.92	33.96	1.39	3.32	26.99	107.5	0.523
454	3.69	34.12	0.69	3.39	27.14	400	3.78	34.07	0.87	3.38	27.09	97.8	0.630
681	3.29	34.29	0.56	3.39	27.31	500	3.60	34.16	0.64	3.38	27.18	89.2	0.728
912	2.94	34.36	0.64	3.49	27.40	600	3.43	34.23	0.57	3.39	27.25	82.9	0.818
1412	2.36	34.51	0.72	3.31	27.57	700	3.27	34.30	0.56	3.39	27.32	76.2	0.902
1861	1.99	34.57	1.13	3.36	27.65	800	3.10	34.33	0.56	3.44	27.36	72.0	0.983
						1000	2.81	34.41	0.65	3.48	27.45	63.7	1.130
						1200	2.57	34.48	0.67	3.38	27.53		
						1500	2.26	34.52	0.77	3.31	27.59		

110-61 BROWN BEAR; September 8, 1955; 1247 GCT; 50°58'N, 145°29'W; sounding, 2337 fm; wind, 170°, force 6 kt; weather, cloudy; sea, smooth; visibility, 8; barometer, 30.36 in; clouds, 6, amt, 7; air temperature, dry 49°, wet 46°.

0	10.94	32.67	6.38	1.41	25.00	0	10.94	32.67	6.38	1.41	25.00	297.2	0.000
10	10.98	32.66	6.41	1.46	24.98	10	10.98	32.66	6.41	1.46	24.98	298.0	0.030
19	10.89	32.67	6.42	1.44	25.00	20	10.88	32.69	6.42	1.44	25.02	294.8	0.059
29	10.58	32.74	6.47	1.52	25.11	30	10.02	32.75	6.46	1.52	25.22	276.3	0.088
49	8.18	32.80	7.02	1.61	25.54	50	7.80	32.81	7.04	1.62	25.61	238.7	0.140
73	5.66	32.87	7.06	1.77	25.94	75	5.59	32.88	7.06	1.78	25.95	206.0	0.195
97	4.92	32.92	6.88	1.83	26.07	100	4.83	32.92	6.81	1.83	26.07	195.2	0.246
146	4.29	33.54	4.64	2.90	26.62	150	4.28	33.60	4.40	2.90	26.66	138.0	0.330
192	4.21	33.82	2.82	2.93	26.85	200	4.19	33.83	2.53	2.94	26.85	120.0	0.397
195	4.19	33.82	2.65	2.89u	26.85	250	3.99	33.89	1.71	3.06	26.92	113.5	0.455
288	3.90	33.94	1.40	3.18	26.98	300	3.88	33.96	1.32	3.21	26.99	107.3	0.512
482	3.64	34.13	0.62	3.38	27.15	400	3.72	34.06	0.85	3.36	27.08	98.0	0.617
720	3.21	34.30	0.47	3.35	27.33	500	3.59	34.14	0.58	3.38	27.16	90.8	0.716
954	2.89	34.40	0.47	3.32	27.44	600	3.41	34.22	0.48	3.37	27.25	83.2	0.808
1430	2.31	34.51	0.69	3.30	27.58	700	3.25	34.29	0.46	3.36	27.32	76.8	0.892
1911	1.96	34.59	1.28	3.21	27.67	800	3.12	34.34	0.45	3.34	27.37	71.4	0.971
2366	1.76	34.61	1.87	3.10	27.70	1000	2.84	34.42	0.47	3.32	27.46	63.1	1.118
2392	1.76	34.62	1.83	3.07	27.72	1200	2.58	34.47	0.57	3.32	27.52		
2856	1.63	34.67	2.36	2.96	27.76	1500	2.28	34.53	0.77	3.29	27.60		
2861	1.62	34.65	2.36	3.00	27.74	2000	1.91	34.59	1.38	3.19	27.67		
3347	1.55	34.68	2.79	2.85	27.77	2500	1.70	34.63	1.98	3.06	27.71		
3352	1.54	34.67	2.79	2.89	27.76	3000	1.58	34.67	2.51	2.96	27.76		
3837	1.51	34.68	3.07	2.89	27.78								
3842	1.51	34.68	3.16	2.85	27.78								

BROWN BEAR; September 9, 1955; 0639 GCT; 50°58'N, 142°46'W; sounding, 1825 fm; wind, 120°, force 4 kt; weather, overcast; sea, smooth; visibility, 8; barometer, 30.36 in; clouds, 4, amt, 8; air temperature, dry 48°, wet 46°. 110-62

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L
0	11.44	32.71	6.59	1.25	24.94
10	11.27	32.71	6.41	1.25	24.96
19	11.26	32.71	4.67	1.27	24.96
29	11.07	32.72	5.96	1.27	25.00
49	7.26	32.78	4.69	1.60	25.66
73	5.84	32.83	5.10	1.74	25.88
97	5.32	32.84	5.45	1.73	25.95
146	4.80	33.53	4.27	2.42	26.55
186	4.82	33.84	2.71	2.41u	26.79
195	4.79	33.84	2.56	2.58	26.80
281	4.21	33.93	1.57	2.94	26.93
469	3.88	34.13	0.63	3.23	27.12
701	3.44	34.28	0.41	3.39	27.29
937	2.94	34.38	0.56	3.33	27.42
1417	2.33	34.50	0.69	3.30	27.56
1900	1.94	34.58	1.32	3.28	27.66

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m
0	11.44	32.71	6.59	1.25	24.94	302.8	0.000
10	11.27	32.71	6.41	1.25	24.96	300.0	0.030
20	11.26	32.71	6.18	1.27	24.97	299.8	0.060
30	11.06	32.72	5.81	1.27	25.01	295.5	0.090
50	7.03	32.79	4.69	1.62	25.70	230.3	0.142
75	5.74	32.83	5.13	1.74	25.89	211.5	0.198
100	5.19	32.85	5.41	1.74	25.97	206.0	0.251
150	4.80	33.60	3.65	2.44	26.61	143.3	0.339
200	4.76	33.86	2.48	2.59	26.82	123.4	0.407
250	4.37	33.91	1.86	2.80	26.90	115.4	0.468
300	4.16	33.94	1.42	3.00	26.95	111.3	0.525
400	3.95	34.06	0.81	3.18	27.06	100.2	0.635
500	3.81	34.15	0.56	3.26	27.15	92.2	0.735
600	3.64	34.22	0.45	3.34	27.22	85.3	0.829
700	3.43	34.28	0.43	3.39	27.29	79.0	0.915
800	3.20	34.33	0.45	3.37	27.35	72.9	0.998
1000	2.83	34.40	0.56	3.32	27.44	64.6	1.147
1200	2.56	34.46	0.56	3.30	27.51		
1500	2.26	34.51	0.76	3.29	27.58		
2000	(1.84)	(34.59)	(1.55)	(3.28)	(27.68)		

BROWN BEAR; September 9, 1955; 2044 GCT; 50°58'N, 140°12'W; sounding, 2065 fm; wind, 040°, force 6 kt; weather, sky obscured; sea, slight; visibility, 7; barometer, 30.29 in; clouds, 4, amt, 9; air temperature, dry 53°, wet 50°. 110-63

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L
0	11.84	32.66	6.09	1.15	24.83
10	11.81	32.66	5.99	1.25	24.83
19	11.81	32.66	6.36	1.30	24.83
29	10.70	32.69	6.56	1.25	25.05
49	6.79	32.74	5.96	1.64	25.70
73	5.40	-	6.48	1.81	-
97	5.20	33.12	5.23	2.13	26.18
146	5.75	33.87	2.16	2.86	26.71
192	5.68	33.95	1.61	2.97	26.78
195	5.66	33.95	1.47	3.03	26.77
283	5.36	33.97	1.20	3.14	26.84
473	4.34	34.09	0.66	3.29	27.04
723	3.67	34.29	0.39	3.44	27.27
963	3.09	34.36	0.44	3.39	27.39
1448	2.37	34.49	0.67	3.39	27.55
1941	1.96	34.58	1.29	3.28	27.65
2435	1.74	34.63	2.09	3.18	27.71

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m
0	11.84	32.66	6.09	1.15	24.83	313.4	0.000
10	11.81	32.66	5.99	1.25	24.83	312.7	0.031
20	11.80	32.66	6.44	1.30	24.83	312.5	0.063
30	10.36	32.70	6.57	1.25	25.12	285.1	0.092
50	6.31	32.74	6.55	1.67	25.75	225.0	0.144
75	5.38	32.91	6.46	1.81	26.00	201.2	0.197
100	5.21	33.39	4.98	2.31	26.40	163.7	0.243
150	5.75	33.89	2.04	2.87	26.73	132.2	0.318
200	5.64	33.95	1.51	3.00	26.79	126.7	0.384
250	5.47	33.96	1.29	3.09	26.82	124.0	0.448
300	5.28	33.98	1.16	3.16	26.86	120.2	0.510
400	4.74	34.03	0.78	3.24	26.96	110.6	0.629
500	4.22	34.11	0.64	3.31	27.08	99.3	0.738
600	3.91	34.21	0.52	3.38	27.19	88.8	0.837
700	3.71	34.28	0.40	3.43	27.26	81.3	0.927
800	3.49	34.32	0.40	3.43	27.32	76.5	1.012
1000	3.03	34.37	0.45	3.39	27.40	68.3	1.170
1200	2.64	34.43	0.52	3.39	27.48		
1500	2.31	34.50	0.74	3.38	27.57		
2000	1.94	34.59	1.39	3.26	27.67		
2500	(1.73)	(34.63)	(3.33)	(3.17)	(27.71)		

UW
NORPAC

OBSERVED						COMP
Z	T	S	O_2	PO_4-P	σ_t	
m	°C	‰	ml/L	µg at/L	g/L	

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-64 BROWN BEAR; September 10, 1955; 1127 GCT; 50°54'N, 137°37'W; sounding, 2040 fm; wind, 340°, force 6 kt; weather, overcast; sea, slight; visibility, 7; barometer, 30.18 in; clouds, 6, amt, 8; air temperature, dry 52°, wet 50°.

0	12.44	32.68	6.27	1.03	24.73	0	12.44	32.68	6.27	1.03	24.73	322.6	0.000
10	12.44	32.68	6.23	1.04	24.73	10	12.44	32.68	6.23	1.04	24.73	322.6	0.030
19	12.46	32.68	6.25	1.02	24.72	20	12.46	32.68	6.26	1.02	24.72	323.0	0.064
29	12.45	32.68	6.22	1.00	24.72	30	12.45	32.68	6.23	1.00	24.72	322.8	0.097
49	8.16	32.75	6.78	1.43	25.51	50	7.99	32.76	6.78	1.44	25.53	245.3	0.154
73	6.57	32.84	6.75	1.55	25.80	75	6.53	32.84	6.74	1.55	25.80	220.0	0.212
97	6.06	32.84	6.80	1.56	25.86	100	5.99	32.85	6.81	1.56	25.88	212.8	0.267
146	5.33	33.11	6.32	1.98	26.15	150	5.30	33.34	6.26	2.02	26.34	168.6	0.363
190	4.88	33.73	3.81	2.68u	26.71	200	4.82	33.76	3.44	2.61	26.74	131.7	0.439
194	4.95	33.72	3.98	2.53	26.68	250	4.44	33.85	2.24	3.03	26.85	121.0	0.505
279	4.27	33.89	1.81	3.18	26.90	300	4.18	33.92	1.61	3.25	26.93	113.0	0.564
472	3.86	34.09	0.84	3.35	27.10	400	3.91	34.03	1.08	3.32	27.04	102.1	0.675
711	3.49	34.23	0.56	3.47	27.25	500	3.86	34.11	0.78	3.37	27.11	95.8	0.778
950	3.03	34.37	0.44	3.29	27.40	600	3.74	34.17	0.64	3.43	27.17	90.0	0.876
1438	2.36	34.49	0.73	3.32	27.55	700	3.52	34.23	0.56	3.46	27.24	83.5	0.969
1931	1.95	34.57	1.27	3.26	27.65	800	3.32	34.29	0.48	3.42	27.31	77.2	1.055
2419	1.70	34.63	1.96	3.19	27.71	1000	2.94	34.39	0.44	3.30	27.43	66.0	1.211
2429	1.72	34.63	1.98	3.12	27.70	1200	2.62	34.45	0.53	3.32	27.50		
2922	1.61	34.65	2.41	2.96	27.74	1500	2.28	34.50	0.78	3.32	27.57		
2927	1.60	34.65	2.42	3.02	27.74	2000	1.91	34.58	1.34	3.25	27.66		
3413	1.55	34.67	2.72	2.94	27.78	2500	1.70	34.63	2.06	3.16	27.71		
3418	1.55	34.67	2.76	2.97	27.78	3000	1.58	34.65	2.50	3.00	27.74		

110-65 BROWN BEAR; September 11, 1955; 0645 GCT; 50°58'N, 134°51'W; sounding, 1900 fm; wind, 335°, force 6 kt; weather, partly cloudy; sea, slight; visibility, 7; barometer, 30.04 in; clouds, 4, amt, 2; air temperature, dry 53°, wet 52°.

0	13.25	32.30	6.25	0.62	24.28	0	13.25	32.30	6.25	0.62	24.28	366.0	0.000
10	13.10	32.29	6.23	0.70	24.30	10	13.10	32.29	6.23	0.70	24.30	363.0	0.036
19	13.08	32.30	6.18	0.62	24.32	20	13.08	32.30	6.16	0.61	24.31	362.0	0.073
29	13.07	32.29	6.18	0.59	24.32	30	13.06	32.29	6.18	0.59	24.31	362.0	0.109
49	7.08	32.55	6.71	1.51	25.50	50	7.03	32.57	6.71	1.52	25.52	246.8	0.170
73	6.27	32.68	6.42	1.67	25.70	75	6.23	32.68	6.41	1.69	25.71	228.7	0.217
97	5.86	32.89	5.94	1.93	25.92	100	5.82	32.98	5.71	2.02	26.00	201.0	0.278
146	6.11	33.61	3.61	2.41	26.46	150	6.11	33.66	3.49	2.45	26.51	153.8	0.367
192	5.59	33.86	2.76	2.68	26.71	200	5.58	33.86	2.70	2.70	26.73	132.4	0.440
195	5.69	33.85	2.79	2.68	26.70	250	5.18	33.91	2.17	2.91	26.81	126.2	0.507
289	4.94	33.92	1.87	3.01	26.86	300	4.89	33.92	1.78	3.04	26.86	120.4	0.569
482	4.22	34.09	0.65	3.31	27.06	400	4.47	34.01	1.02	3.21	26.97	109.3	0.688
724	3.66	34.26	0.36	3.44	27.24	500	4.17	34.11	0.59	3.32	27.08	98.5	0.797
965	3.12	34.37	0.37	3.44	27.40	600	3.92	34.18	0.44	3.38	27.16	91.0	0.897
1453	2.39	34.49	0.59	3.44	27.55	700	3.71	34.24	0.36	3.43	27.23	84.3	0.991
1946	1.92	34.58	1.33	3.29	27.66	800	3.49	34.30	0.34	3.44	27.30	78.0	1.078
2438	1.70	34.63	1.97	3.19	27.68	1000	3.07	34.38	0.39	3.44	27.41	68.0	1.237
						1200	2.75	34.43	0.46	3.44	27.47		
						1500	2.35	34.50	0.66	3.44	27.57		
						2000	1.90	34.59	1.41	3.27	27.67		
						2500	(1.69)	(34.63)	(2.05)	(3.18)	(27.71)		

BROWN BEAR; September 12, 1955; 0011 GCT; 51°02'N, 132°06'W; sounding, 1470 fm; wind, 205°, force 12 kt; weather, overcast; sea, smooth; visibility, 6; barometer, 29.99 in; clouds, 4, amt, 8; air temperature, dry 56°, wet 54°. 110-66

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m
0	13.90	32.18	6.00	0.56	24.05	0	13.90	32.18	6.00	0.56	24.05	386.8	0.000
10	13.67	32.20	6.13	0.63	24.12	10	13.67	32.20	6.13	0.63	24.12	380.7	0.038
19	13.64	32.20	6.13	0.59	24.12	20	13.63	32.20	6.13	0.59	24.12	379.8	0.076
29	11.83	32.23	6.22	0.79	24.50	30	11.52	32.24	6.23	0.91	24.56	339.0	0.112
49	7.58	32.49	6.37	1.42	25.38	50	7.50	32.52	6.36	1.45	25.42	256.5	0.172
73	6.81	32.68	5.87	1.71	25.64	75	6.79	32.69	5.84	1.72	25.65	234.6	0.233
97	6.64	33.04	4.75	1.98	25.93	100	6.63	33.16	4.57	2.05	26.04	197.7	0.288
145	6.47	33.69	3.07	2.49	26.46	150	6.43	33.72	2.98	2.51	26.51	153.2	0.377
192	6.03	33.90	2.32	2.79u	26.70	200	5.99	33.91	2.31	2.72	26.71	133.3	0.450
194	6.05	33.90	2.47	2.69	26.69	250	5.56	33.95	1.90	2.88	26.79	125.4	0.517
288	5.30	33.96	1.66	2.96	26.84	300	5.25	33.97	1.59	2.98	26.85	120.7	0.580
483	4.53	34.14	0.69	3.34	27.07	400	4.80	34.06	1.04	3.19	26.98	108.9	0.699
728	3.88	34.30	0.26	3.49	27.26	500	4.47	34.15	0.64	3.35	27.08	99.0	0.807
973	3.38	34.39	0.27	3.56	27.38	600	4.19	34.22	0.38	3.42	27.17	90.5	0.907
1465	2.38	34.51	0.62	3.44	27.56	700	3.94	34.28	0.27	3.47	27.24	84.0	1.000
1955	1.93	34.61	1.30	3.34	27.68	800	3.72	34.33	0.25	3.52	27.29	77.7	1.088
						1000	3.32	34.40	0 28	3.56	27.40	69.0	1.247
						1200	2.87	34.45	0.39	3.52	27.48		
						1500	2.33	34.52	0.66	3.43	27.58		
						2000	(1.92)	(34.62)	(1.38)	(3.34)	(27.69)		

BROWN BEAR; September 12, 1955; 0800 GCT; 51°02'N, 131°00'W; sounding, 1377 fm; wind, 190°, force 20 kt; weather, drizzle; sea, slight; visibility, 4; barometer, 29.91 in; clouds, 4, amt, 8; air temperature, dry 56°, wet 56°. 110-67

OBSERVED					COMP	INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m
0	13.87	32.15	6.08	0.54	24.04	0	13.87	32.15	6.08	0.54	24.04	388.0	0.000
9	13.86	32.16	6.15	0.62	24.05	10	13.85	32.16	6.16	0.62	24.05	386.8	0.039
19	13.71	32.16	6.14	0.52	24.08	20	13.36	32.16	6.12	0.53	24.15	377.2	0.077
28	10.33	32.29	6.05	1.09	24.81	30	10.11	32.30	6.04	1.15	24.85	310.0	0.111
47	8.43	32.41	6.01	1.40	25.21	50	8.10	32.43	6.01	1.43	25.26	271.4	0.169
70	6.92	32.64	5.94	1.59	25.60	75	6.77	32.72	5.90	1.61	25.68	232.0	0.232
94	6.33	32.94	5.71	1.82	25.91	100	6.29	33.01	5.59	1.89	25.97	204.7	0.288
144	6.10	33.66	3.95	2.34	26.51	150	6.05	33.69	3.75	2.37	26.54	150.9	0.378
177	5.88	33.79	3.25	2.27u	26.63	200	5.49	33.87	2.92	2.49	26.75	130.8	0.449
188	5.61	33.86	3.06	2.62u	26.72	250	5.08	33.89	2.37	2.58	26.81	124.7	0.515
265	4.98	33.89	2.22	2.60	26.83	300	4.79	33.90	1.87	2.62	26.85	120.7	0.578
448	4.33	34.06	0.90	2.78	27.03	400	4.44	34.00	1.14	2.71	26.97	109.8	0.698
680	4.02	34.28	0.37	3.16	27.23	500	4.28	34.11	0.72	2.88	27.07	99.8	0.807
912	3.40	34.38	0.32	3.05	27.38	600	4.19	34.21	0.47	3.08	27.16	91.2	0.907
1436	2.52	34.51	0.60	2.85	27.56	700	3.98	34.29	0.35	3.17	27.24	83.3	1.000
1980	1.91	34.52r	1.27	2.87	27.62	800	3.69	34.34	0.31	3.13	27.31	76.8	1.087
2358	1.73	34.63	1.90	2.88	27.71	1000	3.21	34.41	0.35	3.00	27.42	67.2	1.244
						1200	2.87	34.46	0.44	2.92	27.48		
						1500	2.44	34.52	0.66	2.85	27.57		
						2000	1.89	34.58	1.29	2.87	27.66		

UW NORPAC

OBSERVED					COMP
Z	T	S	O_2	PO_4-P	σ_t
m	°C	‰	ml/L	µg at/L	g/L

INTERPOLATED					COMPUTED		
Z	T	S	O_2	PO_4-P	σ_t	δ_T	ΔD
m	°C	‰	ml/L	µg at/L	g/L	10^{-5} cm^3/g	dyn. m

110-68 BROWN BEAR; September 13, 1955; 0103 GCT; 51°02'N, 129°58'W; sounding, 690 fm; wind, 140°, force 14 kt; weather, overcast; sea, slight; visibility, 4; barometer, 29.63 in; clouds, 4, amt, 8; air temperature, dry 54°, wet 54°.

0	12.95	32.06	6.18	0.72	24.15	0	12.95	32.06	6.18	0.72	24.15	376.7	0.000
10	12.94	32.05	6.18	0.54	24.14	10	12.94	32.05	6.18	0.54	24.14	376.0	0.038
19	12.65	32.08	6.18	0.62	24.22	20	12.60	32.14	6.18	0.64	24.28	364.5	0.075
29	8.79	32.44	5.08	1.41	25.17	30	8.61	32.47	5.05	1.46	25.23	275.3	0.107
48	7.57	32.64	4.84	1.75	25.50	50	7.48	32.65	4.83	1.78	25.52	246.7	0.159
73	6.96	33.04	3.49	2.23	25.90	75	6.92	33.06	3.47	2.29	25.93	208.7	0.216
97	6.65	33.43	2.67	2.53	26.26	100	6.61	33.47	2.67	2.53	26.29	174.0	0.265
145	6.29	33.74	2.72	2.52	26.54	150	6.24	33.77	2.71	2.52	26.57	147.4	0.346
192	6.02	33.89	2.61	2.61	26.69	200	5.93	33.90	2.45	2.60	26.72	133.6	0.417
194	6.06	33.89	2.52	2.58	26.68	250	5.57	33.95	1.98	2.76	26.79	125.5	0.483
288	5.34	33.97	1.64	2.87	26.85	300	5.28	33.98	1.50	2.88	26.85	120.1	0.546
482	4.75	34.12	0.67	3.03	27.04	400	4.92	34.06	0.91	2.97	26.96	110.2	0.665
726	4.11	34.24	0.40	3.30	27.19	500	4.69	34.13	0.64	3.04	27.04	102.8	0.776
973	3.37	34.32	0.36	3.27	27.33	600	4.44	34.18	0.50	3.17	27.11	96.1	0.881
						700	4.18	34.23	0.43	3.28	27.17	89.8	0.979
						800	3.90	34.27	0.38	3.32	27.24	84.0	1.073
						1000	(3.29)	(34.33)	(0.36)	(3.25)	(27.35)	(74.0)	(1.245)

110-69 BROWN BEAR; September 13, 1955; 0523 GCT; 50°59'N, 129°25'W; sounding, 112 fm; wind, 140°, force 21 kt; weather, intermittent rain; sea, moderate; visibility, missing; barometer, 29.51 in; clouds, 8, amt, 9; air temperature, dry 53°, wet 53°.

0	11.39	32.00	5.87	-	24.39	0	11.39	32.00	5.87	-	24.39	354.0	0.000
9	11.26	32.03	5.78	1.15	24.43	10	11.25	32.04	5.77	1.15	24.45	349.0	0.035
18	10.46	32.17	5.58	1.19	24.68	20	9.77	32.25	5.54	1.21	24.86	308.3	0.068
27	8.80	32.44	5.08	1.46	25.17	30	8.58	32.49	4.95	1.64	25.24	273.3	0.097
46	7.22	32.73	4.73	1.94	25.63	50	6.94	32.88	4.69	1.97	25.78	222.3	0.147
68	6.64	33.15	4.32	2.06	26.03	75	6.63	33.26	3.75	2.10	26.12	190.0	0.198
91	6.62	33.43	3.44	2.31	26.25	100	6.60	33.51	3.27	2.35	26.32	170.8	0.244
137	6.38	33.83	2.70	2.47	26.60								

TABLE A-1. Standardized plankton volumes in upper net hauls (determined as displacement volumes after draining) at CCOFI stations occupied by Black Douglas, Horizon, Spencer F. Baird and Stranger.

Station	Latitude (N)	Longitude (W)	Date	Time (GCT) Start	Time (GCT) End	Vol. water strained (m^3)	Depth of haul (m)	Volume (cc/1000 m^3) total	Volume (cc/1000 m^3) sm. org.
1	45°58'	134°22'	VIII-31	0041	0056	490	0-128	108	108
2	46°00'	138°12'	29	2041	2056	376	0-116	247	247
3	45°57'	142°16'	28	1511	1526	410	0-113	207	207
3.5	45°58'	144°21'	28	0656	0710	468	0-131	128	128
4	45°59'	146°10'	27	2226	2242	369	0-121	819	819
4.5	45°59'	147°58'	27	1511	1526	436	0-124	193	193
5	46°00'	150°01'	27	0231	0246	362	0-140	561	561
6	48°11'	125°05'	IX-2	0837	0848	484	0-97	354	354
7	47°55'	126°04'	2	0254	0309	464	0-132	484	484
8	47°36'	126°59'	1	2201	2215	494	0-126	328	328
9	46°56'	128°40'	1	1216	1230	502	0-139	546	546
10	46°15'	130°19'	1	0346	0401	508	0-126	191	191
11	45°33'	131°59'	VIII-31	1806	1820	506	0-135	190	190
12	44°54'	133°31'	31	0956	1010	447	0-117	262	262
13	44°15'	136°45'	30	0911	0926	351	0-152	162	162
14	44°15'	140°31'	29	0601	0616	349	0-118	338	338
15	46°03'	125°09'	16	0556	0611	438	0-107	767	767
16	45°42'	125°59'	16	1229	1244	492	0-106	923	923
17	45°08'	127°22'	16	2036	2050	423	0-119	229	229
18	44°31'	128°53'	17	0816	0830	380	0-132	147	147
19	43°50'	130°30'	17	1700	1714	472	0-88	199	199
20	42°58'	132°34'	18	0546	0600	391	0-131	133	133
21	42°18'	135°19'	18	1926	1940	444	0-97	207	207
22	42°15'	139°01'	20	0041	0055	399	0-129	378	378
23	42°20'	142°39'	20	1806	1820	415	0-112	142	142
23.5	42°19.5'	144°30'	21	0356	0410	524	0-123	88	88
24	42°17'	146°16'	21	1151	1206	445	0-92	222	222
24-42	40°26'	146°37'	21-22	2356	0010	499	0-119	60	60
25	42°17'	150°00'	26	0216	0231	368	0-131	182	182
25-5	44°10.5'	150°01'	26	1601	1616	308	0-114	266	266
26	43°46'	125°10'	11	0312	0325	566	0-125	226	226
27	43°25'	125°58'	10	1941	1956	469	0-133	602	602
28	42°46'	127°32'	10	0956	1010	606	0-104	241	241
29	42°03'	129°19'	9	1901	1916	425	0-130	75	75
30	41°13'	131°07'	9	0821	0835	382	0-125	76	76
31	40°28'	132°57'	8	2035	2050	396	0-122	86	86
32	40°27'	137°20'	19	1051	1105	431	0-104	39	39
33	41°45'	124°29'	6	1759	1814	544	0-134	276	276
34	41°31'	125°05'	6	2226	2240	416	0-119	1071	1071
35	40°37'	127°03'	7	0946	0957	386	0-122	588	588
36	40°00'	128°41'	7	2116	2131	439	0-137	362	362
36	40°00'	128°41'	7	2041	2051	404	0-99	270	270
37	39°27'	129°55'	8	0456	0510	416	0-87	72	72
38	38°34'	132°39'	11	1646	1700	456	0-128	22	22
39	38°34'	136°07'	13	0936	0950	390	0-145	79	79
40	38°34'	139°35'	14	2246	2300	427	0-142	19	19
40.5	38°35'	141°22'	15	1141	1156	574	0-120	136	91
41	38°39'	142°59'	15	2136	2150	470	0-142	36	36
42	38°37'	146°29'	22	1041	1055	419	0-143	53	53
42.5	38°35'	148°16'	22	1956	2010	520	0-121	42	42

Table A-1, continued

Station	Latitude (N)	Longitude (W)	Date	Time (GCT) Start	Time (GCT) End	Vol. water strained (m^3)	Depth of haul (m)	Volume (cc/1000 m^3) total	Volume (cc/1000 m^3) sm. org.
43	38°35'	149°59'	VIII-24	2336	2350	376	0-130	242	242
43-25	40°19'	150°00'	25	1431	1445	354	0-112	45	45
41-59	36°42'	143°12'	16	1756	1811	560	0-134	23	23
44	39°30'	124°30'	7	1926	1941	453	0-130	530	530
45	39°00'	125°36'	8	1316	1350	380	0-136	13	13
46	38°20'	127°05'	9	0634	0650	477	0-128	462	462
47	37°20'	129°16.5'	9	0216	0231	411	0-142	73	73
48	36°42'	131°22'	10	2056	2110	422	0-134	76	76
49	36°53'	134°46'	12	1256	1310	429	0-127	93	93
50	37°47.5'	123°15'	25	2348	2358	385	0-97	187	187
51	37°43.5'	123°23.8'	25	2115	2131	397	0-139	411	411
52	37°17'	124°21'	25	0610	0626	422	0-132	426	426
53	36°49'	125°57'	24	1546	1601	388	0-142	279	279
54	35°40'	127°49'	23	1556	1610	420	0-139	48	48
55	34°51'	130°09'	22	1831	1845	422	0-129	17	17
56	34°51'	133°27'	20	1805	1821	478	0-131	34	34
57	34°51'	136°45'	19	1256	1311	444	0-133	47	47
57.5	34°52'	138°24.5'	19	0011	0026	550	0-138	20	20
58	34°52'	140°04'	18	1146	1200	477	0-134	44	44
58.5	34°54'	141°45'	18	0026	0040	553	0-128	27	27
59	34°53'	143°23'	17	0846	0901	440	0-138	68	68
60	35°08'	148°00'	23	1651	1706	421	0-115	43	43
61	35°07'	149°40'	24	0142	0155	402	0-129	47	47
62	No tow taken								
63	35°33'	123°06'	31	0015	0031	382	0-138	238	238
64	34°53'	124°30'	31	2056	2110	453	0-117	97	97
65	34°13'	125°54'	IX-1	1526	1541	412	0-146	199	199
66	33°33'	127°16.5'	X-2	0746	0801	498	0-109	48	48
67	33°04'	128°45'	2	2126	2141	376	0-135	11	11
68	33°02'	132°15'	VIII-21	1546	1600	443	0-132	27	27
69	34°19'	120°48'	IX-6	2326	2340	456	0-137	1225	42
70	34°09'	121°09'	6	1716	1730	364	0-129	261	261
71	33°49'	121°51'	6	0641	0655	430	0-135	233	233
72	33°09'	123°13'	5	1755	1811	411	0-135	61	61
73	32°29'	124°35'	5	0246	0301	438	0-131	66	66
74	31°37'	126°19'	4	1115	1131	431	0-137	647	357
75	31°09'	127°48'	3	1856	1910	408	0-133	29	29
76	31°08.5'	130°59'	1	1306	1320	357	0-139	48	48
77	31°08'	134°10'	VIII-30	1546	1601	400	0-136	40	40
77	31°08'	134°10'	30	1626	1640	397	0-131	38	38
77.5	31°08.5'	135°46'	30	0326	0340	520	0-131	35	35
78	31°12'	137°19'	29	1641	1655	394	0-137	43	43
78.5	31°11'	138°54'	29	0306	0320	472	0-133	28	28
79	31°09'	140°29'	28	1816	1830	396	0-134	33	33
79.5	31°09.8'	142°02'	28	0746	0801	448	0-140	100	100
80	31°08.5'	143°39'	27	2236	2251	399	0-137	50	50
80.5	31°11'	145°10'	27	0841	0856	409	0-141	115	115
81	31°07'	146°49.5'	26	2231	2246	392	0-140	115	115
81.5	31°09.5'	148°24'	26	1106	1121	416	0-144	72	72
82	31°12'	150°07'	26	0011	0025	398	0-135	63	63

Table A-1, continued

Station	Latitude (N)	Longitude (W)	Date	Time (GCT) Start	Time (GCT) End	Vol. water strained (m^3)	Depth of haul (m)	Volume (cc/1000 m^3) total	Volume (cc/1000 m^3) sm. org.
83	33°24'	117°54'	IX-6	0311	0325	370	0-129	308	308
84	33°09'	118°23.5'	5	2216	2231	399	0-128	1590	1590
85	32°38'	119°28'	5	1411	1425	372	0-142	681	67
86	32°05'	120°38'	5	0416	0430	381	0-135	304	304
87	31°25'	121°58.5'	4	1616	1630	393	0-140	119	119
87	31°25'	121°58.5'	4	1656	1710	408	0-140	122	122
88	30°24'	124°01'	3	2336	2350	398	0-134	40	40
89	29°34'	125°40'	3	0941	0956	391	0-140	210	210
90	29°17'	129°45'	2	0456	0510	352	0-137	54	54
91	29°17'	132°57'	VIII-31	0956	1011	397	0-133	252	76
91	29°17'	132°57'	31	1026	1041	374	0-134	53	53
92	31°42'	116°42.5'	IX-15	0611	0625	491	0-137	322	118
93	31°31'	117°06'	15	1116	1131	378	0-141	1581	124
94	31°01'	118°07'	15	2156	2211	378	0-127	185	185
95	30°20.5'	119°27'	16	1101	1116	371	0-142	916	377
96	29°41'	120°43.5'	16-17	2356	0010	315	0-139	79	79
97	28°43'	122°37.5'	17	1641	1655	381	0-138	37	37
98	27°26'	125°31'	VIII-15	0326	0340	433	0-135	44	44
99	27°26'	128°34'	16	1711	1725	381	0-135	26	26
100	27°26'	131°38'	18	0316	0330	408	0-138	20	20
101	27°26'	134°45'	19	1611	1626	381	0-131	26	26
101.5	27°27.5'	136°14'	20	0134	0150	565	0-141	18	18
102	27°26'	137°43.5'	20	1546	1601	353	0-140	28	28
102.5	27°26'	139°16.5'	21	0141	0155	528	0-134	17	17
103	27°30.5'	140°49'	21	1426	1440	420	0-140	45	45
103.5	27°30'	142°10'	21	2226	2241	432	0-146	28	28
104	27°38'	144°00'	22	1446	1500	380	0-133	3	3
104.5	27°28'	145°24'	22-23	2346	0000	426	0-142	26	26
105	27°28'	146°56.5'	23	1341	1355	357	0-138	56	56
105.5	27°26'	148°29'	23	2216	2231	447	0-139	27	27
106	27°25'	150°00'	24	1251	1305	353	0-149	40	40
106-82	29°02.5'	150°01'	24-25	2351	0006	430	0-137	23	23
107	29°50'	115°51'	IX-21	1113	1122	319	0-89	505	107
108	29°43'	116°02'	21	0736	0751	401	0-126	673	125
109	29°35'	116°20.5'	21	0236	0251	391	0-131	320	77
110	28°56'	117°38'	20	1441	1455	370	0-130	341	124
111	27°56'	119°35'	19	0356	0410	362	0-140	611	86
112	26°53'	121°39'	18	1041	1056	425	0-135	367	61
113	25°34.5'	124°21'	VIII-14	0642	0656	434	0-135	25	25
114	25°34'	127°21.5'	16	0031	0045	477	0-119	19	19
115	25°39.5'	130°22'	17	1011	1026	435	0-137	28	28
116	25°32'	133°23'	18	2214	2229	393	0-135	23	23
117	27°42'	115°35'	11	0211	0225	451	0-148	184	184
118	27°13.5'	116°30.5'	11	1121	1136	489	0-142	121	121
119	26°31'	117°54.5'	12	0211	0225	518	0-135	60	60
120	25°52.5'	119°06'	12	1316	1330	456	0-136	22	22
121	25°02'	120°45'	13	0426	0440	462	0-127	169	169
122	23°31.5'	123°08'	14	1851	1905	452	0-130	18	18
123	23°42.9'	126°14'	16	0736	0751	456	0-133	37	37
124	23°31'	129°19'	17	1956	2011	551	0-136	31	31

Table A-1, continued

Station	Latitude (N)	Longitude (W)	Date	Time (GCT) Start	Time (GCT) End	Vol. water strained (m^3)	Depth of haul (m)	Volume (cc/1000 m^3) total	Volume (cc/1000 m^3) sm. org.
125	23°40'	132°15'	VIII-19	1316	1330	458	0-127	37	37
126	23°43'	135°11'	20	2336	2350	420	0-128	67	67
126.5	23°42'	136°45'	21	0821	0836	560	0-135	48	48
127	23°39.5'	138°16'	21	1926	1940	460	0-132	33	33
127.5	23°40'	139°41'	22	0426	0441	620	0-134	58	58
128	23°40'	141°06'	22	1236	1251	530	0-132	53	53
128.5	23°38'	142°21.5'	22	2226	2241	489	0-141	22	22
129	23°42'	143°57.5'	23	1141	1156	477	0-135	58	58
129.5	23°46'	145°30'	23	2226	2241	478	0-140	27	27
130	23°48'	146°56'	24	0636	0651	488	0-131	47	47
130.5	23°51.4'	148°37'	24	1640	1656	551	0-140	15	15
131	23°45'	150°00'	25	0626	0640	496	0-134	48	48
131.5	22°34'	154°01'	26	0526	0540	621	0-136	26	26
132	26°05'	114°16'	10	2241	2255	379	0-148	322	322
133	25°49'	144°47'	11	0456	0510	343	0-131	90	90
134	25°09'	116°02'	11	1841	1855	514	0-103	10	10
135	24°06.5'	118°01'	12	1231	1245	523	0-125	27	27
136	23°09'	119°47'	13	0801	0815	570	0-133	30	30
137	21°53.5'	112°14.5'	14	0436	0450	427	0-129	37	37
138	21°48'	124°44'	15	1211	1226	496	0-129	24	24
139	21°53'	127°38'	17	0231	0245	476	0-114	25	25
140	21°52.5'	130°32'	18	1026	1040	419	0-133	38	38
141	21°52'	133°51'	20	0801	0816	460	0-134	67	67
142	24°25'	113°02'	IX-16	1246	1311	454	0-135	31	31
143	23°59.5'	113°44.5'	16	2041	2056	479	0-141	154	154
144	23°27'	114°57'	17	0606	0620	413	0-139	63	63
145	22°26.5'	116°48'	13	1026	1041	502	0-139	50	50
146	21°21.5'	118°40'	12	1856	1911	430	0-139	26	26
147	20°03'	121°17.5'	11	2126	2140	435	0-135	30	24
148	19°59.5'	124°06'	11	0326	0341	432	0-140	19	19
149	19°56'	126°52'	10	0656	0710	437	0-135	27	27
150	19°57.5'	129°44'	9	1231	1246	456	0-136	31	31
151	20°00'	132°45.5'	8	1256	1310	443	0-134	29	29
152	20°03.5'	135°32'	7	1841	1855	426	0-135	21	21
152.5	20°05.5'	137°02'	7	0911	0925	463	0-149	41	41
153	20°07'	138°22.5'	6	2131	2145	415	0-139	24	24
153.5	20°02'	139°53'	6	1226	1240	472	0-139	36	36
154	20°01'	141°16.5'	6	0331	0346	558	0-138	39	39
154.5	20°00'	142°55.5'	5	1546	1601	564	0-139	20	20
155	19°57.5'	144°15'	5	0556	0610	439	0-135	50	50
155.5	19°58'	145°38.5'	4	1826	1841	549	0-133	18	18
156	20°02'	147.08'	4	0856	0910	407	0-135	42	42
156.5	20°05'	148°32'	3	2226	2241	510	0-138	324	20
157	20°03'	150°01.5'	3	1121	1135	436	0-133	39	39
158	23°14.5'	111°01.5'	15	2146	2201	415	0-138	106	106
159	22°44.5'	111°57'	15	1456	1510	363	0-138	121	121
160	22°03.5'	113°12'	15	0326	0340	393	0-138	31	31
161	21°24'	114°26'	14	1756	1810	414	0-142	102	102
162	20°22'	116°19.5'	14	0036	0050	394	0-139	30	30

TABLE A-2. Standardized plankton volumes in upper net hauls (determined as displacement volumes after draining) at CCOFI stations occupied by Paolina-T.

Station	Latitude (N)	Longitude (W)	Date	Time (GCT) Start	Time (GCT) End	Vol. water strained (m^3)	Depth of haul (m)	Volume (cc/1000 m^3) total	Volume (cc/1000 m^3) sm. org.
1	32°22'	118°28.7'	VIII-6	1927	1942	456	0-138	140	140
2	31°39'	118°37.2'	7	0602	0618	463	0-140	194	194
3	30°43'	118°47.7'	7	1850	1904	437	0-137	716	716
4	30°23'	119°28.5'	8	0504	0519	399	0-139	1136	1028
5	30°03'	120°09'	8	1902	1916	478	0-139	132	132
6	30°03.3'	121°07.7'	9	0505	0523	544	0-135	706	357
7	30°00'	122°01'	9	1858	1913	438	0-140	388	388
8	30°37'	122°07.2'	10	0504	0518		Haul not quantitative		
9	31°30'	122°01.3'	10	1913	1927	431	0-142	204	204
10	32°12'	121°59'	11	0504	0521	540	0-137	442	239
11	33°01.5'	121°49'	11	1912	1926	408	0-145	-	-
12	31°28.2'	118°20.5'	16	1859	1914	479	0-133	1086	1086
13	30°45'	118°41'	17	0509	0525	593	0-151	680	240
14	30°01.5'	119°02.5'	17	1901	1915	436	0-138	381	381
15	No tow taken								
16	29°38.2'	120°33'	18	1912	1927	516	0-122	19	19
17	28°59'	120°40'	19	0503	0517	581	0-121	38	38
18	28°04.5'	120°40.5'	19	2031	2046	432	0-139	60	60
19	28°07'	120°04.5'	20	0500	0516	459	0-139	850	207
20	28°06'	119°08.5'	20	1909	1923	534	0-126	22	22
21	28°06'	118°08.5'	21	0511	0525	557	0-120	38	38
22	28°06'	117°24'	21	1908	1924	479	0-140	1278	673
23	Not occupied								
24	29°29'	117°27'	22	1905	1920	450	0-142	249	249
25	30°10'	117°19'	23	0502	0516	499	0-133	136	136
26	30°59.4'	117°13'	23	1900	1915	476	0-129	2504	67
27	31°29.5'	117°28'	24	0508	0523	438	0-134	535	101
28	32°28'	117°53'	24	1906	1921	440	0-140	36	36

TABLE A-3. Standardized plankton volumes in the upper 140 meters (determined as displacement volumes after draining) at Hugh M. Smith stations.

Station	Latitude	Longitude	Date	Time (GCT)	Depth (m)	Volume (cc/1000m^3)
2	23°06'N	160°08'W	VII-16	1958-2032	144	12.9
4	23°46'N	161°38'W	17	1015-1037	144	34.2
5	24°32'N	163°23'W	17	2252-2312	140	21.3
7	25°21'N	165°07'W	18	1417-1452	154	27.1
8	26°02'N	166°41'W	19	0247-0325	142	11.7
10	26°23'N	168°15'W	19	1450-1515	131	18.5
11	26°58'N	170°00'W	20	0256-0322	140	14.6
14	27°39'N	173°15'W	21	0319-0347	140	9.5
16	28°00'N	175°00'W	21	1527-1550	128	24.8
19	29°05'N	178°36'W	24	1515-1541	138	60.9
20a)	30°08'N	180°02'W	25	0320-0414	139	8.8
20b)	30°07'N	179°39'W	25	0422-0431	43	27.3
22	31°46'N	179°58'E	25	2150-2214	141	14.6
23a)	33°39'N	179°57'W	26	0834-0850	186	18.6
23b)	33°40'N	179°59'W	26	0905-0920	59	43.5
24	35°13'N	179°59'W	26	2140-2212	148	4.8
25a)	37°13'N	179°51'W	27	1419-1441	138	51.8
25b)	37°13'N	179°51'W	27	1444-1501	48	36.8
26	38°47'N	179°51'W	28	0310-0335	140	4.3
28a)	40°18'N	179°57'W	28	1531-1600	141	77.6
28b)	40°18'N	179°57'W	28	1604-1609	40	58.7
29	41°50'N	179°56'W	29	0442-0514	140	113.1
32	44°57'N	179°51'W	30	0440-0515	140	224.2
34a)	46°09'N	179°50'W	30	1615-1645	139	74.8
34b)	46°08'N	179°52'W	30	1645-1659	71	122.2
35	47°40'N	179°42'W	31	0339-0400	140	80.0
37a)	49°30'N	179°59'E	31	1847-1913	145	37.1
37b)	49°31'N	179°59'E	31	1916-1929	45	128.2
38	49°31'N	177°21'W	VIII-1	1040-1102	139	197.2
39	49°30'N	175°03'W	1	2210-2240	140	94.2
40a)	49°27'N	172°35'W	2	1030-1045	143	140.8
40b)	49°26'N	172°35'W	2	1056-1110	49	not metered
41a)	48°02'N	172°31'W	3	0024-0043	140	205.9
41b)	48°03'N	172°34'W	3	0047-0055	47	56.0
43	46°29'N	172°33'W	3	1315-1338	142	83.2
44a)	45°02'N	172°28'W	4	0325-0406	139	62.4
44b)	45°03'N	172°29'W	4	0409-0420	51	291.0
46	43°27'N	172°20'W	4	1534-1612	140	17.7
47	41°37'N	172°19'W	5	0401-0440	142	14.6
49	40°19'N	172°33'W	5	1410-1435	140	97.8
50	38°58'N	172°32'W	6	0209-0227	138	12.5
52	37°21'N	172°29'W	6	1449-1515	140	27.3
53a)	35°56'N	172°31'W	7	0102-0130	139	4.6
53b)	35°55'N	172°31'W	7	0131-0138	31	2.5
55	34°24'N	172°35'W	7	1314-1340	140	24.9
56	32°38'N	172°25'W	8	0014-0035	141	14.6
58a)	31°23'N	172°24'W	8	1045-1125	141	31.6
58b)	31°22'N	172°25'W	8	1127-1139	37	27.9
59a)	30°15'N	172°46'W	8	2144-2200	142	10.6
59b)	30°14'N	172°44'W	8	2208-2216	30	8.0

Table A-3, continued

Station	Latitude	Longitude	Date	Time (GCT)	Depth (m)	Volume (cc/1000 m^3)
61a)	29°59'N	170°45'W	VIII-9	1324-1348	141	33.9
61b)	29°58'N	170°43'W	9	1352-1405	33	31.0
62a)	29°54'N	168°51'W	10	0407-0427	140	9.3
62b)	29°54'N	168°50'W	10	0437-0445	21	17.6
64a)	29°51'N	166°49'W	10	1838-1904	140	10.7
64b)	29°51'N	166°48'W	10	1907-1924	40	3.8
65a)	30°01'N	164°52'W	11	0907-0930	140	15.9
65b)	29°59'N	164°49'W	11	0933-0943	30	19.0
66a)	31°39'N	164°43'W	11	2113-2136	140	10.2
66b)	31°38'N	164°42'W	11	2139-2155	41	8.3
67a)	32°54'N	164°57'W	12	0858-0935	139	37.4
67b)	32°54'N	164°58'W	12	0937-1000	33	45.2
68a)	34°37'N	164°42'W	12	2108-2136	140	14.3
68b)	34°38'N	164°41'W	12	2138-2146	34	9.2
69a)	36°03'N	165°00'W	13	0704-0733	140	41.2
69b)	36°01'N	164°58'W	13	0734-0749	30	72.2
70a)	37°28'N	164°57'W	13	1909-1938	139	4.4
70b)	37°29'N	164°55'W	13	1939-1956	33	4.7
71a)	38°59'N	164°56'W	14	0537-0559	140	6.3
71b)	38°59'N	164°55'W	14	0610-0616	17	19.8
73a)	40°29'N	165°01'W	14	1738-1806	140	13.1
73b)	40°27'N	165°02'W	14	1807-1817	20	4.9
74a)	41°59'N	165°01'W	15	0406-0428	100	35.9
74b)	41°57'N	165°02'W	15	0430-0438	13	103.9
76a)	43°30'N	164°57'W	15	1609-1644	140	63.3
76b)	43°30'N	164°59'W	15	1647-1701	20	83.7
77a)	44°58'N	165°01'W	16	0323-0359	140	41.3
77b)	44°57'N	165°02'W	16	0402-0411	10	13.4
79a)	46°28'N	164°59'W	16	1742-1814	140	135.3
79b)	46°29'N	165°02'W	16	1610-1627	15	302.5
80a)	48°04'N	164°55'W	17	0915-0945	139	249.6
80b)	48°06'N	164°54'W	17	0950-1004	15	351.0
81a)	49°31'N	165°01'W	17	2134-2210	140	32.3
81b)	49°30'N	165°00'W	17	2211-2220	25	108.7
83a)	49°40'N	162°29'W	18	0944-1000	137	113.6
83b)	49°41'N	162°27'W	18	1003-1010	31	197.1
84a)	49°47'N	159°43'W	18	2247-2313	141	21.7
84b)	49°48'N	159°42'W	18	2315-2327	33	9.9
86a)	49°33'N	157°24'W	19	1030-1104	139	29.6
87a)	48°05'N	157°24'W	19	2255-2325	140	56.4
87b)	48°06'N	157°24'W	19	2328-2340	26	135.6
89a)	46°29'N	157°07'W	20	1232-1305	138	84.2
89b)	46°28'N	157°07'W	20	1310-1330	23	151.8
90a)	44°59'N	157°25'W	21	0320-0355	140	47.2
90b)	44°58'N	157°26'W	21	0400-0414	29	167.6
93a)	43°27'N	157°26'W	21	1540-1610	141	37.6
93b)	43°26'N	157°26'W	21	1612-1626	22	37.4
94a)	41°58'N	157°23'W	22	0149-0219	140	26.2
94b)	41°57'N	157°23'W	22	0222-0232	27	71.7
96a)	40°29'N	157°31'W	22	1325-1342	119	54.2

Table A-3, continued

Station	Latitude	Longitude	Date	Time (GCT)	Depth (m)	Volume (cc/1000 m^3)
96b)	40°28'N	157°32'W	VIII-22	1352-1400	25	37.3
97a)	39°01'N	157°30'W	23	0038-0107	140	5.5
97b)	38°58'N	157°30'W	23	0110-0121	34	5.2
99a)	37°28'N	157°30'W	23	1244-1314	140	20.1
99b)	37°27'N	157°30'W	23	1316-1324	25	23.9
100a)	35°59'N	157°30'W	23	2317-2343	132	11.3
100b)	35°58'N	157°30'W	23	2345-0000	33	1.6
102a)	34°30'N	157°30'W	24	1044-1120	141	54.9
102b)	34°29'N	157°30'W	24	1124-1131	33	49.2
103a)	32°59'N	157°29'W	24	2204-2233	140	11.2
103b)	32°57'N	157°29'W	24	2234-2258	40	7.2
105a)	31°30'N	157°30'W	25	1058-1134	141	21.6
105b)	31°29'N	157°30'W	25	1135-1202	78	22.7
106a)	29°54'N	157°30'W	25	2224-2300	140	12.6
106b)	29°52'N	157°29'W	25	2303-2313	59	12.1
108a)	28°29'N	157°32'W	26	1106-1136	140	18.0
108b)	28°28'N	157°31'W	26	1138-1200	85	29.4
109a)	26°59'N	157°29'W	26	2232-2255	140	12.2
109b)	26°58'N	157°28'W	26	2257-2308	52	27.4
111	25°31'N	157°31'W	27	1016-1044	147	23.8
112a)	23°56'N	157°31'W	27	2208-2240	140	15.6
112b)	23°55'N	157°31'W	27	2244-2254	49	29.1
114a)	22°32'N	157°37'W	28	0940-1009	143	17.5
114b)	22°31'N	157°37'W	28	1011-1021	40	36.3

a) Deep sample.
b) Shallow sample.

TABLE A-4. Standardized plankton volumes (determined by suction-filtration method) collected with the Clarke-Bumpus net at Brown Bear stations.

Station	Latitude	Longitude	Date	Time (GCT)	Approx. maximum depth of haul (m)	Displacement volume (cc/1000 m^3)
110-1	54°54'N	134°06'W	VIII-6	1800-1835	200	215
110-2	54°56'N	134°31'W	6	2308-2330	"	40
110-3	55°04'N	135°05'W	7	0600-0620	"	97
110-4	54°58'N	136°08'W	7	1430-1450	"	41
110-5	55°01'N	139°10'W	8	1345-1408	"	66
110-6	55°01'N	141°58'W	9	0623-0655	"	62
110-7a	56°05'N	143°03'W	9	2000-2015	"	59
110-8	57°09'N	144°10'W	10	0620-0800	"	65
110-9	58°16'N	142°57'W	11	0635-0647	"	70
110-10	58°37'N	142°24'W	11	1140-1212	"	91
110-11	58°54'N	142°01'W	11	2015-2034	121	24
110-12	59°05'N	141°43'W	12	0050-0150	200	21
110-13	59°21'N	141°34'W	12	0345-0415	"	64
110-14	59°14'N	142°54'W	12	1219-1248	"	71
110-15	59°13'N	144°28'W	12	2208-2232	"	70
110-19A	60°35'N	145°59'W	17	0240-0252	135	100
110-19B	60°28'N	146°52'W	17	1940-1955	100	842
110-20	59°16'N	149°30'W	17	2330-2345	200	109
110-21	58°50'N	149°04'W	18	0250-0315	130	118
110-22	58°23'N	148°45'W	18	1130-1210	"	138
110-23	57°58'N	148°27'W	18	1942-2015	200	80
110-24	57°30'N	148°15'W	19	1209-1250	"	244
110-25	56°33'N	147°37'W	20	0754-0836	"	162
110-26	55°00'N	146°44'W	21	0145-0210	"	38
110-27	55°00'N	148°34'W	22	1236-1300	130	114
110-28	55°06'N	150°32'W	23	0100-0200	200	120
110-29	55°44'N	151°08'W	23	0933-1010	"	100
110-31	56°28'N	151°59'W	23	2335-0010	"	86
110-33	57°08'N	151°56'W	24	0600-0710	50	180
110-35	58°12'N	151°16'W	25	0840-0850	"	532
110-37	58°47'N	152°50'W	25	1930-2000	"	344
110-39	57°57'N	154°18'W	26	1256-1310	100	274
110-40	57°28'N	155°10'W	26	2214-2235	70	162
110-42	55°41'N	155°11'W	29	0517-0545	200	115
110-44	55°00'N	155°11'W	29	1405-1435	"	101
110-45	54°37'N	155°12'W	29-30	2330-0010	"	77
110-46	53°24'N	155°20'W	30	1400-1430	240	141
110-47	54°03'N	157°47'W	IX-1	0230-0300	200	40
110-49	54°34'N	159°36'W	1	1346-1406	50	264
110-51	54°18'N	161°20'W	3	0449-0515	180	322
110-52	54°03'N	161°19'W	3	1018-1036	200	87
110-53	53°38'N	161°28'W	3	2058-2118	210	36
110-54	52°38'N	161°14'W	4	0430-0530	170	65
110-55	50°58'N	161°09'W	4	2100-2200	200	42
110-56	51°02'N	158°36'W	5	1239-1300	160	69
110-57	51°00'N	156°04'W	6	0312-0400	150	85
110-58	51°04'N	153°23'W	6	1509-1533	"	56
110-59	51°00'N	150°47'W	7	0745-0815	200	96
110-60	51°04'N	148°11'W	7	2321-2352	"	98
110-61a	50°59'N	145°29'W	8	1751-1824	"	40

Table A-4, continued

Station	Latitude	Longitude	Date	Time (GCT)	Approx. maximum depth of haul (m)	Displacement volume (cc/1000 m^3)
110-62	50°58'N	142°46'W	IX-9	0758-0829	160	92
110-63	50°58'N	140°12'W	9	2233-2315	170	62
110-64	50°54'N	137°37'W	10	1558-1634	200	24
110-65	50°58'N	134°51'W	11	0809-0909	140	71
110-66	51°02'N	132°06'W	12	0125-0200	200	98
110-67	51°02'N	131°00'W	12	0644-0720	250	41
110-69	50°59'N	129°25'W	13	0549-0630	200	45

TABLE A-5. Standardized zooplankton amounts by wet weight and displacement volumes in vertical hauls (wire length, 150-0 m) taken with the Marutoku net at Satsuma stations.

Station	Latitude	Longitude	Date	Time (GCT)	Volume of water strained (m^3)	Wet weight (g/1000 m^3)	Displacement volume (cc/1000 m^3)
1	34°00.0'N	140°53.5'E	VIII-2	1930-2100	27.04	15.2	45.5
2	33°02.0'N	141°54.0'E	3	0800-0830	19.01	33.7	72.1
3	32°04.0'N	142°53.0'E	3	1715-1800	22.06	21.5	42.2
4	31°58.0'N	144°17.0'E	4	0405-0447	19.46	24.7	69.9
5	31°54.0'N	145°36.5'E	4	1300-1405	17.98	22.9	60.6
6	31°51.0'N	146°35.0'E	4	2100-2145	18.56	37.2	38.3
7	31°58.0'N	148°25.5'E	5	0930-1030	16.14	25.0	66.3
8	32°00.0'N	149°59.5'E	5	1950-2030	20.08	33.4	22.9
9	32°00.0'N	151°32.5'E	6	0700-0800	18.21	30.8	39.0
10	32°00.0'N	152°59.5'E	6	1745-1830	18.93	45.9	65.0
11	32°00.0'N	154°29.0'E	7	0430-0500	18.12	51.9	53.5
12	32°00.0'N	156°00.0'E	7	1400-1430	19.87	60.9	84.0
13	31°58.0'N	157°31.0'E	7-8	2340-0000	18.21	55.5	77.4
14	32°00.0'N	159°00.0'E	8	0915-0940	19.77	103.4	174.5
15	31°58.5'N	160°25.0'E	8	1900-1935	18.82	54.2	68.5
16	32°00.0'N	162°00.0'E	9	0730-0800	23.44	63.1	91.3
17	32°00.0'N	163°30.0'E	9	1930-2000	20.66	85.2	82.3
18	32°00.0'N	165°00.0'E	10	0428-0510	19.27	30.1	33.7
19	32°00.0'N	166°15.0'E	10	1230-1300	31.61	53.8	91.7
21	32°02.0'N	168°45.0'E	11	0200-0230	24.62	17.9	28.0
22	32°02.0'N	169°58.0'E	11	1040-1100	21.22	26.6	50.4
23	31°00.0'N	172°00.0'E	12	0230-0320	21.12	30.8	30.8
24	30°00.0'N	174°00.0'E	12	1715-1745	22.75	38.1	60.7
25	29°00.0'N	176°00.0'E	13	0650-0800	20.92	18.5	38.7
26	27°54.5'N	172°34.5'E	14	0545-0630	17.98	26.8	28.9
27	26°58.0'N	170°57.5'E	14	1900-2000	18.05	60.3	120.8
28	25°00.0'N	168°45.0'E	15	1030-1110	19.77	22.7	56.1
29	25°13.0'N	167°06.0'E	15	2200-2300	16.65	25.2	14.4
30	25°10.5'N	165°33.0'E	16	0730-0800	17.68	39.0	40.2
31	25°08.0'N	163°48.5'E	16	1645-1730	18.21	14.2	35.7
33	25°08.0'N	160°45.0'E	17	1300-1400	20.21a)	23.8	37.1
34	25°08.0'N	159°15.5'E	18	0000-0040	20.21a)	11.9	27.7
35	25°12.0'N	157°30.0'E	18	1030-1140	20.21a)	24.0	44.5

a) Net was hauled without flowmeter; therefore, volume of water strained is the theoretical value.

TABLE A-6. Standardized zooplankton amounts by wet weight in vertical hauls (wire length, 150–0 m) taken with the Marutoku net at Umitaka Maru stations.

Station	Latitude	Longitude	Date	Time (GCT)	Wet weight (g/1000 m^3)	Organisms removed before weighing	
1	35°00'N	156°00'E	IX-13	0540	8.15		
2	34°54'N	157°20'E	13	1120	17.98	11	Medusae
3	34°54'N	158°37'E	13	1918	21.89	1	Medusa
						1	Fish larva
4	34°55'N	160°01'E	14	0345	-	1	Fish larva
5	34°58'N	161°30'E	14	1125	24.33	2	Medusae
6	35°01'N	162°56'E	14	1915	49.42		
7	35°02'N	164°00'E	15	0315	13.43	2	Medusae
8	35°02'N	165°28'E	15	1120	29.97	3	Medusae
9	35°03'N	167°00'E	15	1930	39.04		
10	35°02'N	168°43'E	16	0345	16.25		
11	35°02'N	170°06'E	16	1125	24.17		
12	35°06'N	171°46'E	16	1920	7.15	5	(Umitaka Bank) Medusae
13	35°02'N	171°38'E	17	0850	16.43	3	(Umitaka Bank 305 m) Medusae
14	35°06'N	172°09'E	18	0330	18.38		
15	35°04'N	173°10'E	18	1020	21.84	1	Fish larva
16	35°00'N	174°42'E	18	1820	6.93	7	Medusae
17	35°20'N	176°39'E	19	0220	21.02		
18	35°02'N	178°00'E	19	1040	5.49	2	Medusae
						1	Salpa
19	34°17'N	177°49'E	20	0215	-		
20	34°58'N	179°10'E	20	1110	19.92	1	Medusa
						22	Salpa
21	35°00'N	179°23'W	20	1825	8.79	1	Cephalopoda young
22	35°01'N	177°54'W	21	0430	28.52		
23	34°35'N	176°55'W	21	1030	22.87	2	Medusae
24	33°40'N	175°34'W	21	1820	35.56		
25	33°05'N	174°44'W	22	0220	20.95	1	Medusa
						1	Cephalopoda young
26	33°10'N	176°15'W	23	0100	8.88	2	Medusae
27	28°10'N	167°27'W	25	0925	14.37	2	Medusae
28	27°10'N	166°15'W	25	1730	14.62	1	Fish larva
29	26°47'N	165°23'W	26	0130	4.32		
30	25°53'N	164°12'W	26	0945	3.56		
31	25°09'N	163°10'W	26	1820	11.58	1	Medusa
32	19°36'N	156°25'W	X-4	2200	17.88	4	Medusae
33	20°04'N	178°33'W	11	0220	17.14	1	Cephalopoda young
34	20°01'N	179°12'E	11	1810	9.62	2	Meduase
35	19°57'N	177°20'E	12	0345	12.45	1	Medusa
36	20.01'N	176°18'E	12	1015	12.51	1	Medusa
						1	Salpa
						1	Fish larva
37	20°02'N	174°50'E	12	1930	16.05	1	Cephalopoda young
38	20°03'N	173°31'E	13	0345	9.52	1	Fish larva
39	20°02'N	172°10'E	13	1240	14.81	16	Medusae
						3	Salpa

Table A-6, continued

Station	Latitude	Longitude	Date	Time (GCT)	Wet weight (g/1000 m^3)	Organisms removed before weighing
40	20°01'N	170°50'E	X-13	1945	7.05	3 Medusae
41	20°00'N	169°00'E	14	0350	8.59	1 Medusa
42	20°03'N	167°44'E	14	1200	13.94	8 Salpa
43	20°04'N	166°22'E	14	2120	6.51	1 Medusa
44	20°05'N	164°39'E	15	0450	11.95	
45	20°03'N	163°28'E	15	1315	5.74	
46	20°20'N	163°03'E	16	0250	5.91	1 Fish Larva
47	20°00'N	161°40'E	16	1150	5.59	2 Fish larvae
48	20°00'N	160°38'E	16	1930	5.31	1 Fish larva
						4 Medusae
49	19°58'N	159°26'E	17	0330	5.01	
50	19°57'N	158°24'E	17	1210	3.69	1 Medusa
51	19°50'N	157°00'E	17	2005	6.71	
52	19°42'N	155°25'E	18	0510	5.05	2 Salpa
53	19°55'N	153°23'E	18	1300	14.37	1 Fish larva
54	20°00'N	151°53'E	18	2110	5.52	
55	20°03'N	150°15'E	19	0420	12.63	
56	20°00'N	149°20'E	19	1220	12.76	
57	20°00'N	148°00'E	19	2000	4.09	

TABLE A-7. Standardized zooplankton amounts by wet weight and displacement volumes in vertical hauls (wire length, 150–0 m) taken with the Marutoku net at Tenyo Maru stations.

Station	Latitude	Longitude	Date	Time (GCT)	Volume of water strained (m^3)	Displacement volume (cc/1000 m^3)	Wet weight (g/1000 m^3)	Organisms removed	Major organisms
1	34°54.4'N	140°02.5'E	VII-17	2226	18.7	91	40		Copepoda
2	34°59.4'N	140°21.3'E	18	0026	19.7	132	67		Copepoda
3	35°00.0'N	141°20.5'E	18	0651	25.8	62	24		Copepoda
4a)	42°47.6'N	144°58.5'E	30	0050	14.1	212	119		Copepoda
5	43°00.0'N	146°00.0'E	30	0630	18.4	886	311		Diatomaceae
6	43°00.0'N	148°00.0'E	30	2042	18.3b)	656	475		Copepoda
7	43°04.0'N	150°22.0'E	31	1120	18.8	995	698		Copepoda
8	43°00.0'N	152°00.0'E	31	2020	20.4	706	415		Copepoda
9	42°59.0'N	154°18.0'E	VIII-1	0855	18.5	119	52	Beroe	Copepoda
10	43°00.0'N	156°00.0'E	1	1745	22.9	245	103		Copepoda
11	43°00.0'N	158°00.0'E	2	0355	19.5	344	111		Diatomaceae
12	43°00.0'N	160°01.5'E	2	1625	21.3	131	53		Copepoda
13	43°00.0'N	162°00.0'E	3	0722	21.3	169	84		Copepoda
14	43°00.0'N	164°00.0'E	3	1957	22.1	176	112		Copepoda
15	43°00.0'N	166°00.0'E	4	0626	22.8	425	296		Copepoda
16	43°00.0'N	168°00.0'E	4	1740	25.7	521	204		Diatomaceae
17	43°00.0'N	170°00.0'E	5	0530	19.2	214	61		Copepoda
18	43°17.0'N	172°09.0'E	5	1638	21.5	130	57		Copepoda
19	43°33.0'N	174°14.5'E	6	0316	21.9	119	56		Copepoda
20	43°00.2'N	176°00.0'E	6	1354	20.0	140	49		Copepoda
21	43°00.0'N	178°00.0'E	7	0152	17.4	132	46		Hydroidae
22	43°00.0'N	180°00.0'E	7	1255	15.1	291	74		Chaetognatha
23	43°57.0'N	177°30.0'E	8	1306	14.9	210	58		Thaliacea
24	44°52.5'N	175°00.0'E	9	0256	17.4	299	174	Ctenophora	Copepoda
25	45°58.5'N	172°34.0'E	9	1710	18.8	356	85		Copepoda
26	46°40.0'N	170°00.0'E	10	0824	15.7	178	235		Diatomaceae
27	47°13.0'N	167°18.0'E	10	2120	17.9	581	192		Copepoda
28	48°20.0'N	165°03.0'E	11	1623	15.6	301	105		Copepoda
29	49°07.0'N	162°29.5'E	12	0458	16.5	303	195		Copepoda
30	47°19.0'N	159°48.0'E	18	0315	23.0	230	81		Copepoda
31	46°45.0'N	157°50.5'E	18	1416	21.2	363	228		Copepoda
32	46°12.0'N	155°56.0'E	19	0935	16.3	141	89		Copepoda
33	45°28.4'N	153°53.0'E	20	0659	19.4	351	211		Copepoda
34	44°41.0'N	152°06.0'E	20	1809	18.4	467	324		Copepoda
35	43°54.2'N	150°18.0'E	21	0530	23.1	390	246		Copepoda
36	43°04.0'N	148°41.0'E	22	1342	16.3	74	35		Copepoda
37	42°15.0'N	147°03.5'E	23	0026	15.7	51	25		Hydroidea
38	42°30.0'N	144°20.0'E	IX-4	0530	14.5	345	161		Copepoda
39	42°05.3'N	144°19.2'E	4	0815	16.3	245	116		Copepoda
40	41°41.0'N	144°13.0'E	4	1157	17.0	253	129		Copepoda
41	40°53.0'N	144°00.0'E	4	1856	15.3	124	65		Copepoda
42	40°00.0'N	144°06.0'E	5	0946	17.7	113	72		Copepoda
43	39°09.5'N	144°18.0'E	5	0855	11.3	71	31		Copepoda
44	38°20.0'N	144°18.0'E	5	1601	16.9	178	102		Copepoda
45	37°35.0'N	144°50.0'E	5	2338	23.4	60	34		Copepoda
46	36°39.0'N	144°26.0'E	6	0800	16.2	68	35		Copepoda
47	35°50.0'N	144°16.0'E	6	1503	13.7	131	66		Copepoda
48	35°00.0'N	144°20.0'E	7	0021	18.3b)	142	67	Pyrosoma from wet weight	Thaliacea

Table A-7, continued

Station	Latitude	Longitude	Date	Time (GCT)	of water strained (m^3)	Displacement volume (cc/1000 m^3)	Wet weight (g/1000 m^3)	Organisms removed	Major organisms
49	35°00.0'N	143°18.5'E	IX-7	0927	16.1	230	133		Copepoda
50	34°55.0'N	142°17.5'E	7	1635	21.2	104	50		Copepoda
51	35°00.0'N	141°17.0'E	8	0007	24.4	49	23		Copepoda
52	34°59.3'N	140°20.0'E	8	0825	18.6	116	90		Copepoda
53	34°54.0'N	140°02.7'E	8	1150	17.5	137	73		Copepoda

a) Hauled from 200 to 0 meters.
b) Flowmeter failure; mean value from all other stations has been used.

TABLE A-8. Standardized zooplankton amounts by wet weight and displacement volumes in vertical hauls (wire length, 150-0 m) taken with modified Marutoku net at Oshoro Maru stations.

Station	Latitude	Longitude	Date	Time (GCT)	Volume of water strained (m^3)	Wire length (m)	Depth of haul assumed from wire angle (m)	Displacement volume (cc/1000 m^3)	Mean displacement volume (cc/1000 m^3)	Wet weight (g/1000 m^3)	Mean wet weight (g/1000 m^3)	Organisms removed before measurement
1	51°43'N	160°30'E	VI-26	0810	23.8	150	150	176	262	183	211	5 jellyfish and 3 Tomopteridae
				1000	24.7	150	150	348		240		2 jellyfish and 6 Tomopteridae
2	52°52'N	161°50'E	27	0323	32.3	150	117	396	385	354	322	Diatoms abundant
				0520	32.1	150	138	374		291		Diatoms abundant
3	53°00'N	164°00'E	27-28	2345	25.3	150	146	71	124	73	66	2 jellyfish
				0035	26.1	150	145	176		60		1 jellyfish
4	53°01'N	166°00'E	28	2025	33.1	150	137	151	148	73	93	20 jellyfish
				2124	26.3	150	139	144		112		10 jellyfish
5	53°00'N	168°00'E	29	0625	29.9	150	136	134	109	51	35	6 jellyfish
				0718	31.2	150	146	83		20		1 jellyfish
6	53°02'N	170°00'E	30	0252	23.8	150	148	193	143	36	31	4 jellyfish
				0348	23.8	150	150	92		26		6 jellyfish
7	53°02'N	172°00'E	VII-1	0308	23.8	150	149	134	193	156	195	Diatoms abundant
				0356	23.8	150	146	252		264		2 jellyfish; diatoms abundant
8	54°30'N	170°33'E	1	1638	28.5	150	132	281	321	200	251	1 jellyfish
				1748	26.6	150	148	361		302		4 jellyfish
9	55°58'N	169°11'E	2	1835	38.0	150	109	232	219	125	135	2 jellyfish
				1930	35.4	150	102	206		144		1 jellyfish
10	57°41'N	167°59'E	3	2240	25.3	150	142	364	442	405	395	8 jellyfish
				2327	26.5	150	144	521		385		
11	58°29'N	166°32'E	4	0815	32.1	150	106	573	733	527	522	3 jellyfish
				0907	30.5	150	114	892		516		2 jellyfish
12	59°00'N	170°00'E	5	0305	25.3	150	138	419	325	326	264	1 jellyfish
				0410	24.2	150	137	231		202		1 jellyfish
13	58°30'N	173°15'E	6	0130	27.8	150	136	374	414	297	307	6 jellyfish
				0240	26.5	150	142	453		316		5 jellyfish
14	56°54'N	173°17'E	VII-6	1750	25.6	150	142	227	346	153	200	
				1840	29.6	150	132	446		247		2 jellyfish
15	55°10'N	173°17'E	7	0748	24.8	150	131	435	391	297	233	2 jellyfish and 5 Tomopteridae
				0830	24.8	150	114	347		169		5 jellyfish and 2 Tomopteridae
16	53°25'N	173°38'E	7	2135	30.0	150	114	560	526	569	479	1 jellyfish
				2227	29.3	150	114	491		388		2 fish larvae
17	53°10'N	175°04'E	8	0525	30.7	150	127	971	758	958	752	
				0615	34.8	150	111	546		551		1 Tomopteris
18	52°50'N	176°56'E	8	1500	41.5	150	90	578	735	514	701	3 jellyfish and 5 Tomopteridae
				1555	35.7	150	101	891		887		2 fish larvae
19	52°28'N	178°40'E	9	0017	32.9	150	101	219	236	182	144	2 jellyfish and 1 Tomopteris
				0105	34.0	150	120	253		106		1 Tomopteris

Table A-8, continued

Station	Latitude	Longitude	Date	Time (GCT)	Volume of water strained (m^3)	Wire length (m)	Depth of haul assumed from wire angle (m)	Displacement volume (cc/1000 m^3)	Mean displacement volume (cc/1000 m^3)	Wet weight (g/1000 m^3)	Mean wet weight (g/1000 m^3)	Organisms removed before measurement
0	52°30'N	178°54'W	9	1140	35.0	150	113	571	371	621	404	3 jellyfish and 1 Tomopteris; diatoms abundant
				1230	29.2	150	121	121		186		1 jellyfish; diatoms abundant
1	53°14'N	178°40'E	10	0500	25.0	150	133	472	373	332	260	3 jellyfish, 1 Tomopteris and squid larva
				0550	26.2	150	134	275		188		3 jellyfish
2	53°54'N	178°40'E	10	1225	27.0	150	133	526	415	396	291	16 jellyfish
				1300	26.9	150	132	305		186		7 jellyfish and 3 Tomopteridae
3	53°03'N	178°52'W	11	0030	26.6	150	134	451	441	457	452	2 jellyfish; diatoms abundant
				0140	25.1	150	138	430		447		7 jellyfish
4	53°54'N	178°52'W	11	0740	23.8	150	114	367	424	305	318	Diatoms abundant
				0830	24.5	150	147	482		331		Diatoms abundant
5	55°34'N	178°48'W	11	2035	32.9	150	118	304	395	264	364	
				2135	35.0	150	114	486		464		1 jellyfish
6	57°00'N	178°58'W	12	0720	27.5	150	134	291	398	250	298	4 jellyfish
				0815	26.1	150	139	506		345		
7	58°49'N	178°43'W	VII-12	2010	52.2	150	93	326	275	315	273	Diatoms abundant
				2200	36.4	150	94	225		230		Diatoms abundant
8	57°16'N	171°50'W	14	2103	34.5	100	77	174	202	72	147	
				2138	21.8	100	86	229		223		4 jellyfish
9	57°27'N	170°11'W	15	0355	10.8	50	48	741	722	397	428	
				0400	9.1	50	47	703		460		
0	57°26'N	167°05'W	15	1620	7.9	50	49	1494	932	1172	823	
				1627	9.7	50	49	371		475		1 jellyfish
1	57°23'N	163°58'W	16	0455	10.0	50	46	1680	1829	1270	1524	
				0458	9.1	50	49	1978		1777		3 jellyfish
2	57°16'N	161°40'W	16	1600	8.3	50	50	410	519	86	140	6 jellyfish
				1600	8.9	50	50	629		194		22 jellyfish
3	56°04'N	163°15'W	20	0652	7.9	50	50	456	590	238	277	
				0656	9.1	50	49	725		315		1 jellyfish
4	54°46'N	165°19'W	20	2045	25.8	150	146	225	213	187	170	4 jellyfish and 1 Tomopteris
				2055	27.8	150	133	201		152		1 Tomopteris
5	53°40'N	163°31'W	21	0925	23.8	150	148	160	235	244	161	1 jellyfish
				1025	23.8	150	146	311		77		6 jellyfish
6	52°58'N	162°19'W	21	1730	24.9	150	142	177	181	76	82	2 jellyfish
				1840	23.8	150	146	185		88		
7	52°15'N	161°09'W	22	0135	25.4	150	142	213	232	192	201	12 jellyfish; diatoms abundant
				0250	23.8	150	149	252		211		5 jellyfish; diatoms abundant

TABLE A-9. Standardized settling volumes in vertical hauls (wire length, 100–0 m) taken with "O" net at Yushio Maru stations.

Station	Latitude	Longitude	Date	Time (GCT)	Wire angle	Settling volume (cc/1000 m^3)
1001	41°30'N	142°00'E	VIII-11	1355	35	500
1009	42°32'N	144°35'E	14	0840	25	3200
1010	42°30'N	144°00'E	17	0658	3	1500
1011	42°00'N	144°02'E	17	1135	5	1900
1013	40°00'N	144°05'E	18	0615	30	1700
1014	40°10'N	144°00'E	18	1520	30	1400
1016	38°23'N	146°00'E	19	0830	30	1300
1018	38°12'N	144°17'E	20	0515	42	800
1019	38°14'N	143°29'E	20	2130	7	1900
1021	38°14'N	142°00'E	21	0840	30	1100
1022	39°30'N	142°27'E	31	0650	30	2100
1024	39°35'N	144°00'E	31	1855	20	2200
1027	39°32'N	146°59'E	IX-1	1835	25	600
1028	40°28'N	145°58'E	2	0755	20	3000
1030	40°27'N	144°00'E	2	2240	40	1200

TABLE A-10. Standardized zooplankton amounts by settling volume and wet weight in vertical hauls taken with "O" net at Ryofu Maru stations.

Station	Latitude	Longitude	Date	Time (GCT)	Wire angle	Wire length	Settling volume (cc/1000 m^3)	Wet weight (g/1000 m^3)
448	34°48'N	140°53'E	VIII-13	1855	12	0-100	520	
451	35°47'N	141°29'E	14	1300	5	0-100	760	
452	37°00'N	141°30'E	14	2225	36	0-100	1450	
454	36°53'N	142°26'E	15	0700	35	0-100	980	
456	36°28'N	144°05'E	15	2155	22	0-150	500	30.1
457	37°23'N	144°05'E	16	0710	15	0-100	560	
458	38°31'N	144°10'E	16	1606	8	0-100	1250	
459	37°22'N	145°52'E	17	0412	-	0-100	360	
460	36°52'N	147°37'E	17	1308	22	0-100	960	
461	37°41'N	147°06'E	17	2233	28	0-100	4450	
464	36°16'N	146°09'E	18	1628	22	0-100	720	
466	35°35'N	147°19'E	19	0400	3	0-100	680	
468	36°14'N	148°16'E	19	2200	23	0-100	1200	
471	36°36'N	149°21'E	20	2232	30	0-100	500	
472	36°09'N	150°16'E	21	0405	42	0-100	680	
473	35°40'N	150°58'E	21	-	-	0-150	-	90.2
474	35°10'N	151°36'E	21	1632	20	0-100	420	
475	35°51'N	151°57'E	21	2205	27	0-100	540	
477	37°10'N	151°52'E	22	0810	32	0-100	1100	
480	35°54'N	153°38'E	23	0405	30	0-100	1100	
481	33°37'N	154°58'E	23	2242	42	0-150	560	35.7
484	35°03'N	156°53'E	24	1614	38	0-100	1400	
487	33°37'N	158°17'E	25	1007	33	0-100	780	
489	34°56'N	159°00'E	25	2156	35	0-100	560	
491	36°05'N	160°02'E	26	1015	26	0-150	1650	118
493	36°08'N	157°11'E	27	0348	37	0-100	600	
495	36°24'N	154°53'E	27	1608	22	0-100	780	
497	37°22'N	153°18'E	28	0656	10	0-100	580	
499	37°34'N	150°38'E	28	2208	45	0-100	1050	
501	37°23'N	149°05'E	29	0956	30	0-100	2200	
502	38°28'N	148°52'E	29	1953	41	0-150	560	67.6
503	38°28'N	148°02'E	30	1316	45	0-100	680	
504	38°32'N	147°02'E	30	2210	38	0-100	1750	
506	38°30'N	145°27'E	31	1014	25	0-100	2150	
524	42°25'N	149°24'E	IX-12	-	-	0-150	-	359

TABLE A-11. Standardized settling volumes in vertical hauls (100-0 m) taken with "O" net at Shumpu Maru (KMO) stations.

Station	Latitude	Longitude	Date	Time (GCT)	Wire angle	Settling volume (cc/1000 m^3)
I-1	31°13'N	131°35'E	VIII-22	0510	30	900
I-2	30°58'N	131°50'E	22	0215	16	900
I-3	30°44'N	132°09'E	21	2230	32	600
I-4	30°30'N	132°25'E	21	1925	25	700
I-5	30°09'N	132°49'E	21	1455	24	700
I-6	29°49'N	133°13'E	21	1030	15	800
I-7	29°28'N	133°37'E	21	0630	15	700
I-8	29°00'N	134°10'E	21	0110	(0	500
K-1	33°00'N	134°10'E	19	0405	10	900
K-2	32°40'N	134°10'E	19	0710	18	600
K-3	32°10'N	134°10'E	19	1700	27	700
K-4	31°40'N	134°10'E	19	2120	18	600
K-5	31°10'N	134°10'E	20	0310	30	600
K-6	30°40'N	134°10'E	20	0800	31	600
K-7	30°10'N	134°10'E	20	1218	(5	700
K-8	29°40'N	134°10'E	20	1653	10	600
G-1	33°20'N	135°40'E	27	2330	38	1400
G-2	33°00'N	135°40'E	28	0300	20	1700
G-3	32°30'N	135°40'E	28	0830	32	1200
G-4	32°00'N	135°40'E	28	1420	32	1300
G-5	31°30'N	135°40'E	28	2100	30	900
G-6	31°00'N	135°40'E	29	0050	35	800
G-7	30°30'N	135°40'E	29	0515	35	800
H-1	34°00'N	137°00'E	30	2215	55	1800
H-2	33°30'N	137°00'E	30	1735	24	800
H-3	33°00'N	137°00'E	30	1330	(9	1100
H-4	32°30'N	137°00'E	30	0745	20	800
H-5	32°00'N	137°00'E	30	0300	26	800
H-6	31°30'N	137°00'E	29	2226	36	800
H-7	31°00'N	137°00'E	29	1810	33	1000
H-8	30°30'N	137°00'E	29	1400	22	900
U-1	34°20'N	137°38'E	IX-3	0215	40	1100
U-2	34°00'N	137°38'E	3	0505	35	1200
U-3	33°30'N	137°38'E	3	0945	17	600
U-4	33°00'N	137°38'E	3	1712	13	1100
U-5	32°30'N	137°38'E	3	2110	10	900
U-6	32°00'N	137°38'E	4	0200	20	800
N-1	34°10'N	138°15'E	6	0230	50	2300
N-2	33°40'N	138°15'E	5	2150	16	1400
N-3	33°10'N	138°15'E	5	1634	11	1000
N-4	32°37'N	138°15'E	5	0730	38	2100
N-5	32°00'N	138°15'E	5	0155	35	1300
N-6	31°32'N	138°15'E	4	2037	25	1200
N-7	31°10'N	138°15'E	4	1600	16	1100

TABLE A-12. Settling volumes and wet weights (not standardized) in vertical hauls taken with Kitahara net at Kagoshima Maru stations (wire length, 200-0 m) and Keiten Maru stations (wire length, 50-0 m).

Station	Latitude	Longitude	Date	Time (GCT)	Wire length (m)	Settling volume (cc)	Wet weight of total matter (g)
Ka520	20°01'N	130°00'E	VII-26	1458	200	4.5	1.4
Ka521	20°37'N	130°58'E	27	0200	200	2.0	0.6
Ka522	21°12'N	132°01'E	27	1210	200	11.5	2.4
Ka523	21°52'N	133°03'E	27	2226	200	7.2	1.8
Ka524	22°24'N	134°00'E	28	0805	200	4.7	1.5
Ka525	23°00'N	135°00'E	28	1821	200	4.8	1.2
Ka526	24°00'N	134°42'E	29	0450	200	4.4	1.4
Ka527	24°56'N	134°27'E	29	1250	200	3.4	1.0
Ka528	26°00'N	134°08'E	29	2245	200	10.7	2.6
Ka529	26°33'N	133°51'E	30	0424	200	7.0	1.9
Ka530	27°02'N	133°51'E	30	1110	200	7.4	2.0
Ka531	28°01'N	133°37'E	30	1850	200	13.4	3.2
Ka532	29°00'N	133°18'E	31	0500	200	11.0	2.7
Ka533	30°00'N	133°00'E	31	1322	200	2.2	0.4
Ke541	20°00'N	130°00'E	13	0902	50	7.6	1.9
Ke543	23°03'N	129°58'E	14	0705	50	2.0	0.5
Ke544	24°01'N	130°00'E	14	1232	50	7.0	1.7
Ke545	25°02'N	129°56'E	14	1958	50	4.8	0.9
Ke546	26°00'N	130°00'E	15	0405	50	11.8	3.0
Ke547	27°00'N	129°57'E	15	1125	50	2.6	0.6
Ke548	27°59'N	129°50'E	15	1815	50	7.2	2.1
Ke549	29°00'N	129°51'E	17	0205	50	12.5	2.6
Ke550	30°02'N	130°11'E	17	1113	50	8.6	2.3
Ke553	25°42'N	129°01'E	VIII-19	0413	50	11.3	2.8
Ke558	24°44'N	131°27'E	20	0420	50	10.8	2.5
Ke560	26°01'N	132°00'E	20	1836	50	8.5	1.9
Ke561	27°21'N	131°58'E	21	0407	50	13.0	2.7
Ke562	27°27'N	131°30'E	21	0814	50	8.0	2.1
Ke563	27°29'N	130°59'E	21	1230	50	7.7	1.8
Ke564	27°40'N	130°25'E	21	1720	50	4.5	1.0
Ke565	27°53'N	130°02'E	21	2115	50	4.8	1.1
Ke566	28°03'N	129°31'E	22	0128	50	7.2	1.7
Ke567	28°17'N	129°00'E	23	0730	50	9.5	2.4
Ke568	28°27'N	128°29'E	23	1135	50	5.5	1.6
Ke569	29°07'N	126°49'E	23	1608	50	10.0	2.3
Ke570	28°50'N	127°29'E	23	2041	50	8.2	2.1
Ke571	29°01'N	127°07'E	24	0019	50	4.5	0.9
Ke572	29°07'N	126°49'E	24	0235	50	4.8	1.0
Ke573	29°10'N	126°23'E	24	0545	50	5.6	1.7
Ke574	29°13'N	126°00'E	24	0818	50	7.5	1.7
Ke575	29°29'N	126°30'E	24	1210	50	8.0	1.8
Ke576	29°44'N	127°00'E	24	1454	50	3.5	0.4
Ke577	29°59'N	127°31'E	24	1928	50	4.2	1.4
Ke578	30°15'N	128°00'E	24	2240	50	7.7	2.1

TABLE A-13. Standardized zooplankton amounts by wet weight and displacement volumes in vertical hauls (50–0 m) taken with fine net (0.086-mm mesh diameter) at Oshoro Maru stations.

Station	Latitude	Longitude	Date	Time (GCT)	Volume of water strained (m^3)	Depth of haul (from wire angle) (m^3)	Displacement volume (cc/1000 m^3)	Wet weight (g/1000 m^3)	Remarks
1	51°43'N	160°30'E	VI-26	0900	1.6	50	1312	147	Mixed with copepods
2	52°52'N	161°50'E	27	0400	1.9	47	1631	494	Mixed with copepods and chaetognaths
3	53°00'N	164°00'E	28	0025	1.7	50	764	288	Mixed with copepods
4	53°01'N	166°00'E	28	2115	1.7	49	471	66	
5	53°00'N	168°00'E	29	0707	1.9	50	947	152	Mixed with copepods
6	53°02'N	170°00'E	30	0340	1.6	50	875	153	Exclusively diatoms
7	53°02'N	172°00'E	VII-1	0350	1.9	43	147	616	Exclusively diatoms
8	54°30'N	170°33'E	1	1700	2.0	50	750	330	Copepods abundant
9	55°58'N	169°11'E	2	1900	2.0	46	600	256	Copepods abundant
10	57°41'N	167°59'E	3	2318	1.9	50	315	265	Copepods abundant
11	58°29'N	166°32'E	4	0823	1.7	48	706	935	Copepods abundant
12	59°00'N	170°00'E	5	0315	1.9	50	947	458	Copepods and chaetognaths abundant
13	58°30'N	173°15'E	6	0137	1.9	49	316	544	
14	56°54'N	173°17'E	6	1755	1.8	50	778	214	Copepods abundant
15	55°10'N	173°17'E	7	0750	1.6	48	1313	780	Exclusively diatoms
16	53°25'N	173°38'E	7	1940	1.9	47	789	615	Mixed with copepods
17	53°10'N	175°04'E	8	0532	1.8	49	1556	880	Copepods abundant
18	52°50'N	176°56'E	8	1510	2.0	46	450	595	Mixed with copepods
19	52°28'N	178°40'E	9	0022	1.6	44	563	702	
20	52°30'N	178°54'W	9	1145	2.0	45	2600	1614	Exclusively diatoms
21	53°14'N	178°40'E	10	0508	1.6	50	625	805	
22	53°54'N	178°40'E	10	1230	1.6	49	813	648	Mixed with copepods
23	53°03'N	178°52'W	11	0032	1.6	49	1750	1355	Exclusively diatoms
24	53°50'N	178°52'W	11	0750	1.6	50	625	827	Mixed with copepods
25	53°34'N	178°48'W	11	2045	1.7	46	1000	824	Mixed with copepods
26	57°00'N	178°58'W	12	0726	1.6	49	1125	818	Mixed with copepods
27	58°49'N	178°43'W	12	2020	1.6	41	1500	638	Exclusively diatoms
"	"	"	12	2208	1.6	47	313	330	
28	57°16'N	171°50'W	14	2135	2.0	48	350	378	
29	57°27'N	170°11'W	15	0405	1.6	49	500	637	Mixed with copepods and chaetognaths
30	57°26'N	167°05'W	15	1630	1.6	49	300	79	Copepods abundant
31	57°23'N	163°58'W	15	0505	1.6	49	1425	887	Nearly exclusively copepods
32	57°16'N	161°40'W	16	1607	1.6	50	375	138	
33	56°04'N	163°15'W	20	0700	1.6	50	500	162	Copepods abundant
34	54°46'N	165°19'W	20	2100	1.7	48	353	277	Exclusively diatoms
35	53°40'N	163°31'W	21	0936	1.6	50	750	123	Copepods abundant
36	52°58'N	162°19'W	22	0340	1.6	48	375	174	Mixed with copepods
37	52°15'N	161°09'W	22	0145	1.6	49	2000	582	Exclusively diatoms

TABLE B-1. Numbers of euphausiids per 1000 m^3 at CCOFI stations. [a)]

(The count for each species is tabulated to include total number and number of adults, juveniles, and larvae in that order)

UPPER NET (Section Ia)
(ca. 140-0 m)

Station	Euphausia pacifica	Nematoscelis difficilis	Tessarabrachion oculatus	Thysanoessa gregaria	Thysanoessa longipes	Thysanoessa spinifera
1	18 (0, 14, 4)		2 (0, 2, 0)		275 (4, 271, 0)	
2	208 (0, 208, 0)		6 (0, 6, 0)		91 (24, 35, 32)	
3	34 (0, 34, 0)	2 (2, 0, 0)			171 (0, 34, 137)	
3.5	98 (4, 94, 0)				176 (11, 94, 71)	
4	94 (0, 94, 0)				576 (69, 460, 47)	
4.5	299 (0, 276, 23)				184 (0, 138, 46)	
5	711 (0, 667, 44)		* (1, 14, 0)		281 (0, 281, 0)	
6	12170 (2610, 9560, 0)				37 (37, 0, 0)	116 (16, 100, 0)
7	356 (0, 237, 119)		* (0, 31, 0)		* (128, 0, 0)	
8	4818 (0, 2705, 2113)		12 (4, 8, 0)		12 (0, 12, 0)	
9	284 (8, 276, 0)	4 (4, 0, 0)	* (3, 15, 0)		260 (104, 156, 0)	
10	1143 (0, 867, 276)	20 (0, 0, 20)	20 (0, 20, 0)		178 (79, 99, 0)	
11	95 (0, 95, 0)				106 (59, 47, 0)	
12	989 (11, 578, 400)	2 (2, 0, 0)	2 (0, 2, 0)		665 (44, 444, 177)	
13	255 (85, 85, 85)	257 (0, 0, 257)	* (0, 2, 0)	1724 (6, 522, 1196)	17 (3, 14, 0)	
14	301 (9, 63, 229)	4632 (37, 2760, 1835)		4369 (9, 230, 4130)		
15	174 (14, 160, 0)		18 (0, 18, 0)		206 (46, 160, 0)	
16	268 (0, 170, 98)				342 (49, 293, 0)	
17	56 (0, 0, 56)	56 (0, 0, 56)			16 (2, 14, 0)	
18	78 (31, 16, 31)	92 (13, 0, 79)			78 (31, 47, 0)	
19	513 (0, 420, 93)	677 (0, 292, 385)			142 (2, 140, 0)	
20	576 (64, 512, 0)	647 (5, 128, 514)	6 (0, 6, 0)	10 (0, 10, 0)	330 (0, 10, 320)	
21				16 (11, 5, 0)	865 (0, 2, 863)	
22		84 (0, 28, 56)		292 (3, 123, 166)		
23	* (0, 39, 13)	120 (0, 72, 48)		1716 (2, 195, 1519)	2 (0, 2, 0)	
23.5	13 (0, 13, 0)	699 (0, 686, 13)		747 (2, 401, 344)		
24	91 (0, 91, 0)	449 (382, 0, 67)		1370 (0, 90, 1280)		
24-42		2 (0, 2, 0)		88 (8, 0, 80)	2 (0, 2, 0)	
25	* (1, 7, 0)	682 (0, 220, 462)		307 (0, 62, 245)	27 (0, 27, 0)	
5-25	68 (0, 3, 65)		3 (0, 0, 3)		229 (0, 35, 194)	
26	922 (53, 816, 53)		4 (0, 4, 0)	248 (62, 155, 31)	20 (0, 2, 18)	
27	469 (0, 164, 305)				83 (83, 0, 0)	
28	570 (7, 85, 478)	20 (2, 2, 16)			60 (11, 33, 16)	
29	9 (0, 9, 0)	174 (0, 5, 169)			59 (2, 57, 0)	* (2, 0, 0)
30	73 (10, 21, 42)	482 (42, 42, 398)	3 (0, 3, 0)		42 (0, 42, 0)	
31		230 (0, 33, 197)		3 (0, 3, 0)	13 (0, 3, 10)	
32		7 (7, 0, 0)		163 (0, 163, 0)		
33	1257 (772, 485, 0)				4 (2, 2, 0)	17 (11, 6, 0)
34	457 (10, 447, 0)				9 (4, 5, 0)	
35	1012 (156, 726, 130)	5 (5, 0, 0)	10 (0, 10, 0)		46 (10, 36, 0)	
36	762 (54, 599, 109)	216 (0, 108, 108)		5 (5, 0, 0)	64 (0, 10, 54)	
37	28 (2, 26, 0)	141 (21, 96, 24)		528 (48, 456, 24)	24 (0, 24, 0)	
38				2 (0, 2, 0)		
39	5 (0, 5, 0)	* (1, 0, 0)		246 (138, 108, 0)		
40				33 (0, 12, 21)		
40.5	14 (0, 14, 0)			335 (84, 181, 70)		
41	* (0, 8, 0)			194 (2, 11, 181)		
42	7 (0, 7, 0)			211 (53, 158, 0)		
42.5				15 (2, 0, 13)		
43				146 (0, 29, 117)		
43-25	11 (0, 11, 0)			248 (62, 155, 31)		

a) Identified by E. Brinton.

Table B-1, continued

UPPER NET (Section Ia)
(ca. 140–0 m)

Station	Euphausia pacifica	Nematoscelis difficilis	Tessarabrachion oculatus	Thysanoessa gregaria	Thysanoessa longipes	Thysanoessa spinifera
41–59	4 (0, 4, 0)					
44	954 (0, 883, 71)				4 (4, 0, 0)	71 (0, 0, 71)
45	395 (0, 16, 379)	16 (0, 0, 16)				
46	1430 (86, 671, 671)	679 (8, 252, 419)	4 (0, 4, 0)	92 (0, 92, 0)	4 (0, 4, 0)	168 (0, 0, 168)
47	24 (0, 12, 12)	413 (0, 12, 401)		12 (0, 12, 0)		
48		114 (0, 71, 43)		91 (0, 48, 43)		
50	727 (0, 561, 166)					685 (0, 332, 353)
51	4977 (0, 1723, 3254)					1732 (0, 201, 1531)
52	38567 (1033, 34122, 3412)	512 (0, 0, 512)	(Does not occur after Station 46)	5 (5, 0, 0)	(Does not occur after Station 46)	256 (0, 171, 85)
53	6567 (152, 6415, 0)	103 (5, 49, 49)		28 (28, 0, 0)		64 (0, 64, 0)
54	33 (0, 33, 0)	19 (2, 0, 17)		100 (0, 83, 17)		
55				57 (0, 57, 0)		
56				48 (0, 4, 44)		
59				57 (0, 0, 57)		
60				10 (0, 10, 0)		
61				2 (0, 2, 0)		
63	5655 (0, 754, 4901)	544 (0, 0, 544)		42 (0, 42, 0)		13 (0, 13, 0)
64	154 (0, 46, 108)	139 (0, 15, 124)		17 (2, 0, 15)		15 (0, 0, 15)
65	155 (0, 97, 58)	272 (0, 39, 233)		43 (0, 41, 2)		
66	305 (0, 305, 0)	112 (0, 16, 96)		402 (0, 209, 193)		
67				3 (3, 0, 0)		
68				7 (0, 5, 2)		
69	1912 (70, 193, 1649)	39 (4, 0, 35)				158 (0, 0, 158)

* The species was present in the deep tow (0–700 m) taken at the station.

Table B-1, continued

UPPER NET (Section Ib)
(ca. 140-0 m)

Station	Euphausia eximia	Euphausia pacifica	Nematoscelis difficilis	Nematoscelis microps	Thysanoessa gregaria	Thysanoessa spinifera
70		1723 (90, 333, 1300)	519 (5, 242, 272)			3 (0, 3, 0)
71		10698 (279, 10419, 0)	53 (7, 23, 23)		39 (16, 23, 0)	47 (0, 47, 0)
72			111 (0, 111, 0)		388 (0, 256, 132)	
73		434 (0, 434, 0)	229 (0, 46, 183)		342 (0, 68, 274)	160 (0, 0, 160)
74			408 (0, 111, 297)		259 (0, 185, 74)	
83		1351 (486, 757, 108)	378 (54, 189, 135)		189 (27, 162, 0)	
84		452 (0, 226, 226)	200 (0, 75, 125)		25 (0, 25, 0)	175 (0, 0, 175)
85		3 (0, 3, 0)	100 (3, 59, 38)		56 (0, 56, 0)	
86		1706 (328, 1378, 0)	66 (0, 0, 66)		82 (3, 79, 0)	
87			713 (0, 51, 662)		204 (0, 204, 0)	
88			* (0, 1, 0)		15 (0, 15, 0)	
90	20 (0, 20, 0)			3 (0, 3, 0)		
92		1345 (61, 1253, 31)				116 (4, 112, 0)
93	6 (3, 0, 3)	96 (3, 93, 0)	820 (6, 259, 555)		149 (0, 149, 0)	
94			21 (0, 8, 13)		13 (0, 13, 0)	
95	1038 (3, 938, 97)	70 (0, 70, 0)	485 (0, 388, 97)		518 (0, 453, 65)	
96			6 (0, 6, 0)		38 (0, 38, 0)	
97					8 (0, 5, 3)	
98				12 (0, 5, 7)		
99				13 (0, 5, 8)		
100				2 (0, 2, 0)		
107		6 (0, 6, 0)	175 (0, 75, 100)		275 (0, 275, 0)	28 (0, 28, 0)
108	314 (17, 262, 35)	110 (0, 110, 0)	366 (17, 105, 244)		296 (0, 244, 52)	
109	709 (11, 698, 0)	44 (8, 36, 0)	57 (36, 18, 3)		144 (36, 108, 0)	3 (0, 3, 0)
110	8172 (0, 1654, 6518)		1751 (0, 486, 1265)		97 (0, 97, 0)	486 (0, 0, 486)
111	444 (47, 309, 88)		531 (0, 354, 177)		508 (0, 486, 22)	
112	284 (0, 228, 56)		170 (0, 170, 0)		75 (0, 75, 0)	
118	206 (0, 71, 135)	73 (4, 69, 0)	225 (24, 89, 112)		180 (45, 135, 0)	44 (0, 44, 0)
119	151 (0, 88, 63)		8 (0, 6, 2)		63 (0, 63, 0)	
120					2 (0, 2, 0)	
121	2 (2, 0, 0)				74 (0, 74, 0)	
122					11 (0, 11, 0)	
123				* (1, 0, 1)	13 (0, 13, 0)	
124				22 (0, 0, 22)		
125				2 (0, 2, 0)		
126				40 (0, 2, 38)		
126.5				2 (0, 2, 0)		
127				* (0, 1, 0)		
127.5				6 (0, 6, 0)		
128				2 (0, 2, 0)		
129				6 (0, 2, 4)		
129.5				2 (0, 0, 2)		
130.5				2 (0, 2, 0)		
131				6 (0, 6, 0)		
132	549 (0, 343, 206)	138 (0, 69, 69)	6105 (0, 4733, 1372)		69 (0, 69, 0)	222 (0, 222, 0)
133	285 (41, 209, 35)	210 (0, 210, 0)	489 (0, 332, 157)		297 (0, 297, 0)	35 (0, 35, 0)
134	12 (0, 12, 0)	* (0, 1, 0)	2 (0, 0, 2)	* (0, 0, 3)	72 (2, 70, 0)	
135	305 (0, 305, 0)				19 (0, 19, 0)	
136	* (0, 2, 0)			9 (0, 9, 0)	* (0, 1, 0)	
137				4 (0, 4, 0)		
138	2 (2, 0, 0)			16 (0, 4, 12)		

(Does not occur before Station 90)

(Does not occur before Station 90)

Table B-1, continued

UPPER NET (Section Ib)
(ca. 140-0 m)

Station	Euphausia eximia	Euphausia pacifica	Nematoscelis difficilis	Nematoscelis microps	Thysanoessa gregaria	Thysanoessa spinifera
139				2 (0, 0, 2)		
140				4 (0, 4, 0)		
141				18 (0, 9, 9)		
142	1411 (0, 1059, 352)		7 (0, 7, 0)		2 (0, 2, 0)	
143	979 (0, 979, 0)		15 (0, 15, 0)			
144	404 (135, 267, 2)					
145	180 (90, 90, 0)					
148				2 (0, 2, 0)		
149				23 (0, 5, 18)		
151				2 (0, 2, 0)		
152				48 (0, 25, 23)		
152.5				4 (0, 4, 0)		
153				* (0, 1, 0)		
153.5				10 (4, 6, 0)		
154				2 (0, 0, 2)		
154.5				12 (0, 0, 12)		
155				57 (0, 2, 55)		
155.5				11 (0, 11, 0)		
156				137 (0, 0, 137)		
157				2 (0, 0, 2)		
157A				33 (0, 11, 22)		
157B				2 (0, 0, 2)		
159	634 (0, 496, 138)					
160	603 (5, 534, 64)					
161	3768 (0, 3768, 0)					
162	196 (0, 36, 160)					

* The species was present in the deep tow (0-700 m) taken at the station.

Table B-1, continued

CLOSING NET (Section Ia)
(ca. 280–140 m)

Station	Euphausia pacifica	Nematoscelis difficilis	Tessarabrachion oculatus	Thysanoessa gregaria	Thysanoessa longipes	Thysanoessa spinifera
3a)	377 (0, 377, 0)					
4	298 (0, 298, 0)				17 (2, 0, 15)	
5	500 (0, 500, 0)					
14	6 (6, 0, 0)	3 (3, 0, 0)	9 (0, 9, 0)		121 (69, 52, 0)	
15	1 (0, 1, 0)		12 (7, 5, 0)		34 (9, 25, 0)	
16	4 (0, 4, 0)	2 (2, 0, 0)	8 (0, 8, 0)		84 (84, 0, 0)	
17	12 (0, 12, 0)					
18			11 (8, 3, 0)		19 (19, 0, 0)	
20	27 (3, 24, 0)		24 (0, 24, 0)		82 (49, 33, 0)	
21	7 (0, 0, 7)		7 (0, 0, 7)			
23				2 (0, 0, 2)		
24	4 (0, 4, 0)	24 (11, 0, 13)		2 (0, 2, 0)	52 (0, 0, 52)	
25		3 (0, 0, 3)				
26			9 (9, 0, 0)			
29	211 (0, 211, 0)		2 (0, 2, 0)			
32	51 (0, 51, 0)	2 (2, 0, 0)		384 (0, 103, 281)		
34	437 (185, 252, 0)					
35	16 (5, 11, 0)	3 (3, 0, 0)	5 (5, 0, 0)		8 (8, 0, 0)	
36	191 (0, 191, 0)					
37		5 (5, 0, 0)	12 (12, 0, 0)	60 (48, 12, 0)	79 (26, 53, 0)	
39				395 (269, 126, 0)		
40				12 (0, 0, 12)		
41				30 (0, 0, 30)		
45	2653 (0, 2653, 0)					
46	21 (0, 15, 6)	38 (38, 0, 0)		2 (2, 0, 0)	6 (6, 0, 0)	
47	233 (0, 233, 0)					
48	38 (0, 38, 0)	209 (0, 57, 152)		21 (0, 2, 19)		
49				7 (7, 0, 0)		
52	9 (0, 7, 2)					5 (0, 0, 5)
53	180 (0, 64, 116)	361 (0, 52, 309)		52 (0, 26, 26)		13 (0, 0, 13)
54	171 (0, 171, 0)					
56	1942 (8, 1808, 126)	21 (0, 0, 21)		25 (4, 0, 21)		2 (0, 2, 0)
58				2 (2, 0, 0)		
62	729 (320, 409, 0)	143 (125, 18, 0)		18 (18, 0, 0)		
63	566 (94, 472, 0)	47 (47, 0, 0)				
64	971 (0, 971, 0)					
65	221 (0, 221, 0)					
66		6 (2, 4, 0)		28 (28, 0, 0)		
67		3 (0, 3, 0)				
68	2 (0, 2, 0)					

a) Stations omitted because none of species listed were present.

Table B-1, continued

CLOSING NET (Section Ib)
(ca. 280–140 m)

Station	Euphausia eximia	Euphausia pacifica	Nematoscelis difficilis	Nematoscelis microps	Thysanoessa gregaria	Thysanoessa spinifera
70		352 (286, 66, 0)	22 (22, 0, 0)			
71		47 (0, 47, 0)	37 (37, 0, 0)		42 (42, 0, 0)	
72		85 (0, 85, 0)				
73		731 (0, 731, 0)				
74					70 (0, 70, 0)	
83		265 (151, 114, 0)	208 (170, 38, 0)		19 (19, 0, 0)	
84		529 (128, 401, 0)	5 (5, 0, 0)			
85		753 (27, 726, 0)				
87		97 (2, 95, 0)				
93			26 (26, 0, 0)			
94			8 (3, 0, 5)			
95	3 (0, 3, 0)				3 (0, 3, 0)	
96					6 (0, 6, 0)	
108		27 (5, 22, 0)	26 (24, 2, 0)		15 (10, 5, 0)	
109	29 (0, 26, 3)	5 (0, 5, 0)	128 (128, 0, 0)		5 (5, 0, 0)	33 (5, 28, 0)
110	63 (0, 6, 57)	38 (0, 38, 0)	16 (3, 8, 5)		5 (0, 0, 5)	
111			9 (6, 3, 0)		61 (0, 61, 0)	
112					61 (0, 61, 0)	
114				2 (0, 2, 0)		
120					2 (0, 2, 0)	
121					2 (0, 2, 0)	
129				2 (0, 2, 0)		
132	48 (0, 48, 0)					
133	6 (0, 6, 0)	20 (0, 20, 0)				
134	12 (0, 12, 0)		81 (0, 0, 81)			10 (0, 10, 0)
142	123 (17, 106, 0)					
143	961 (8, 953, 0)		23 (0, 23, 0)			
144	109 (109, 0, 0)					
145	26 (0, 26, 0)					
150				2 (0, 2, 0)		
151				2 (0, 2, 0)		
156				31 (4, 27, 0)		
157				16 (7, 9, 0)		
157B				12 (0, 12, 0)		
158	132 (0, 132, 0)					
159	800 (28, 772, 0)					
161	101 (0, 101, 0)					
162	229 (76, 140, 13)					

Table B-1, continued

UPPER NET (Section II)
(ca. 140-0 m)

Station	Euphausia gibboides	Euphausia hemigibba	Euphausia mutica	E. mutica-recurva furcilia larvae	Euphausia recurva	Thysanopoda aequalis
20a)					3 (3, 0, 0)	
21	* (4, 0, 0)				* (1, 0, 0)	
25		27 (0, 0, 27)		* (0, 0, 169)	* (1, 0, 0)	
30					3 (3, 0, 0)	
31				3		
32	11 (7, 4, 0)					
37	10 (0, 10, 0)		2 (2, 0, 0)	26	2 (2, 0, 0)	
39	62 (0, 62, 0)		26 (21, 5, 0)		13 (13, 0, 0)	* (0, 1, 0)
40	2 (0, 0, 2)					7 (0, 5, 2)
40.5	50 (5, 45, 0)		7 (5, 2, 0)		14 (14, 0, 0)	2 (2, 0, 0)
41			* (1, 0, 0)		* (1, 0, 0)	
42	67 (14, 53, 0)		36 (36, 0, 0)	210	19 (19, 0, 0)	
42.5	2 (0, 0, 2)					28 (0, 15, 13)
43	234 (0, 234, 0)		* (7, 7, 0)			* (0, 1, 0)
43-25	381 (8, 0, 373)			249		
41-59						7 (0, 5, 2)
46	8 (8, 0, 0)					
48	19 (0, 5, 14)		* (12, 0, 0)		* (6, 6, 0)	43 (0, 0, 43)
49	33 (0, 33, 0)	7 (5, 2, 0)	56 (56, 0, 0)	84	10 (10, 0, 0)	77 (2, 75, 0)
53	13 (10, 3, 0)					
54					2 (2, 0, 0)	
55						71 (0, 14, 57)
56						284 (0, 167, 117)
57		34 (11, 23, 0)	96 (28, 68, 0)	113	5 (5, 0, 0)	52 (5, 47, 0)
57.5						57 (0, 6, 51)
58	4 (0, 4, 0)	26 (13, 13, 0)	15 (2, 13, 0)	213		90 (2, 50, 38)
58.5		38 (0, 25, 13)		13		38 (0, 25, 13)
59	15 (2, 13, 0)	45 (45, 0, 0)	45 (34, 11, 0)	148		13 (0, 13, 0)
60						48 (0, 48, 0)
61						7 (0, 0, 7)
64		* (1, 0, 0)				
66	98 (18, 80, 0)				12 (12, 0, 0)	48 (0, 16, 32)
67						64 (0, 32, 32)
68		2 (0, 0, 2)				54 (0, 36, 18)
71	12 (12, 0, 0)					
72	7 (0, 5, 2)					2 (0, 2, 0)
73	91 (0, 91, 0)				7 (5, 2, 0)	25 (0, 2, 23)
74	74 (0, 74, 0)		37 (0, 37, 0)		111 (0, 111, 0)	
75		5 (0, 5, 0)				73 (0, 61, 12)
76	* (0, 1, 0)	28 (0, 0, 28)	* (3, 0, 0)			129 (3, 126, 0)
77		3 (0, 0, 3)				30 (0, 30, 0)
77.5		15 (0, 0, 15)				40 (0, 25, 15)
78		* (1, 0, 34)		* (0, 0, 6)		95 (0, 38, 57)
78.5		23 (0, 0, 23)				99 (0, 99, 0)
79		3 (0, 0, 3)				53 (0, 35, 18)
79.5		78 (38, 20, 20)				76 (16, 40, 20)
80		23 (0, 0, 23)				25 (0, 25, 0)
80.5		111 (38, 0, 73)				16 (7, 7, 2)
81		128 (0, 0, 128)				13 (0, 8, 5)
81.5		168 (96, 0, 72)				84 (2, 58, 24)
82						51 (0, 26, 25)

a) Stations omitted because none of species listed were present.

Table B-1, continued

UPPER NET (Section II)
(ca. 140-0 m)

Station	Euphausia gibboides	Euphausia hemigibba	Euphausia mutica	E. mutica-recurva furcilia larvae	Euphausia recurva	Thysanopoda aequalis
86	32 (0, 32, 0)				15 (15, 0, 0)	10 (0, 10, 0)
87	18 (0, 0, 18)					
88	40 (0, 40, 0)			3		60 (0, 40, 20)
89	3 (3, 0, 0)	69 (46, 23, 0)	15 (5, 10, 0)	23	74 (5, 69, 0)	56 (13, 43, 0)
90	6 (0, 6, 0)	48 (28, 0, 20)	6 (3, 3, 0)		20 (20, 0, 0)	133 (11, 102, 20)
91		13 (5, 8, 0)				71 (10, 38, 23)
95	5 (0, 5, 0)				5 (5, 0, 0)	
96	38 (0, 19, 19)	29 (0, 10, 19)		171		133 (0, 114, 19)
97	52 (0, 26, 26)	26 (0, 26, 0)		13		19 (0, 6, 13)
98	9 (0, 9, 0)	484 (16, 420, 48)	2 (2, 0, 0)	161	2 (2, 0, 0)	128 (16, 112, 0)
99		39 (0, 39, 0)				39 (0, 0, 39)
100		15 (0, 0, 15)				14 (0, 9, 5)
101						15 (0, 5, 10)
101.5						61 (0, 51, 10)
102						56 (0, 14, 42)
102.5		12 (0, 12, 0)				35 (0, 23, 12)
103		19 (0, 19, 0)				33 (0, 4, 29)
103.5		2 (0, 2, 0)				71 (0, 69, 2)
104						3 (0, 0, 3)
104.5		18 (0, 9, 9)				14 (0, 5, 9)
105		20 (0, 20, 0)				34 (6, 14, 14)
105.5		32 (0, 16, 16)				47 (0, 47, 0)
106		98 (28, 56, 14)				26** (6, 17, 3)
106-82		33 (0, 33, 0)				18 (0, 16, 2)
108	21 (2, 19, 0)				4 (4, 0, 0)	
109	169 (26, 125, 18)	3 (0, 3, 0)		72	72 (36, 36, 0)	36 (0, 0, 36)
110	195 (0, 195, 0)					
111	1025 (30, 796, 199)	28 (6, 22, 0)	25 (3, 22, 0)	132	287 (44, 143, 0)	
112	42 (2, 21, 19)	95 (38, 57, 0)	26 (7, 19, 0)	226	189 (19, 170, 0)	115 (0, 21, 94)
113	30 (2, 14, 14)	106 (9, 69, 28)	16 (16, 0, 0)	28	28 (28, 0, 0)	54 (12, 42, 0)
114		10 (0, 10, 0)				
115		21 (5, 16, 0)				43 (2, 25, 16)
116						10 (0, 10, 0)
118	46 (2, 44, 0)					
119	638 (0, 463, 175)	13 (0, 13, 0)		201		
120	521 (0, 245, 276)			30		76 (0, 30, 46)
121	61 (10, 34, 17)	26 (9, 17, 0)	52 (52, 0, 0)	17	138 (52, 86, 0)	173 (0, 121, 52)
122	195 (0, 195, 0)		2 (2, 0, 0)	9		27 (0, 9, 18)
123	105 (92, 13, 0)	66 (66, 0, 0)	39 (26, 13, 0)	13	4 (2, 2, 0)	91 (52, 13, 26)
124		2 (0, 2, 0)				13 (0, 2, 11)
125	4 (0, 4, 0)	11 (11, 0, 0)				184 (21, 120, 43)
126						38 (0, 19, 19)
126.5		14 (14, 0, 0)				97 (8, 38, 51)
127	* (1, 0, 0)	* (1, 1, 0)	* (1, 0, 0)	*		18 (0, 9, 9)
127.5		13 (0, 13, 0)	39 (26, 13, 0)			250** (18, 142, 90)
128		32 (4, 28, 0)				160 (9, 113, 38)
128.5		2 (0, 2, 0)				4 (0, 4, 0)
129		40 (15, 25, 0)	13 (0, 13, 0)			110 (46, 51, 13)
129.5		17 (0, 17, 0)				19 (0, 19, 0)
130		131 (8, 123, 0)				150** (27, 98, 25)
130.5						9 (0, 9, 0)
131		76 (6, 50, 20)				70 (10, 40, 20)
131.5		6 (6, 0, 0)	2 (0, 2, 0)			73** (21, 42, 0)

Table [illegible] continued

UPPER NET (Station [illegible])
([illegible])

Station	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]				[illegible]	17 (0, 17, 0)
[illegible]					* [illegible]	[illegible]
[illegible]	[illegible]		4 (4, 0, 0)	2	2 (0, 2, 0)	[illegible]
[illegible]	[illegible]	46 (12, 34, 0)	141 (70, 71, 0)	268	52 (12, 35, 0)	[illegible]
[illegible]	[illegible]	428 (16, 16, 396)	187 (187, 0, 0)	216	19 (0, 19, 0)	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]		[illegible]	[illegible]			[illegible]
[illegible]		72 (12, 60, 0)	10 (0, 10, 0)	24		[illegible]
[illegible]		[illegible]	[illegible]	[illegible]		92 (13, 79, 0)
[illegible]	198 (0, 132, 66)					
[illegible]	2 (0, 2, 0)					
[illegible]	3 (0, 3, 0)		27 (27, 0, 0)			
[illegible]	110 (0, 92, 18)	2 (0, 2, 0)	72 (54, 18, 0)	216	18 (18, 0, 0)	[illegible]
[illegible]				22		[illegible]
[illegible]	* (6, 0, 0)	2 (0, 0, 2)	* (0, 42, 0)	* (0, 0, 74)		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		47 (24, 23, 0)
[illegible]	* (1, 0, 0)	4 (2, 0, 2)	201 (110, 91, 0)	37		[illegible]
[illegible]		9 (7, 2, 0)	123 (35, 88, 0)	12		[illegible]
[illegible]		[illegible]	[illegible]	[illegible]		39 (14, 23, 2)
[illegible]						[illegible]
[illegible]		[illegible]	[illegible]			74 (35, 0, 39)
[illegible]			* (10, 10, 0)			[illegible]
[illegible]			[illegible]	[illegible]		79 (24, 40, 15)
[illegible]		[illegible]	[illegible]			[illegible]
[illegible]						117 (0, 117, 0)
[illegible]			[illegible]	[illegible]		152 (7, 18, 127)
[illegible]						[illegible]
[illegible]		36 (0, 0, 36)	2 (0, 2, 0)			352 (36, 206, 120)
[illegible]				2		38 (0, 12, 26)
[illegible]		[illegible]	[illegible]	[illegible]		112 (7, 42, 63)
[illegible]						[illegible]
[illegible]		88 (2, 72, 14)	2 (0, 2, 0)	24		[illegible]
[illegible]						[illegible]

* The species was present in the deep tow (0–700 m) taken at the station.

** The count for Thysanopoda aequalis includes some specimens of Thysanopoda [illegible].

Table B-1, continued

CLOSING NET (Section II)
(ca. 280-140 m)

Station	Euphausia gibboides	Euphausia hemigibba	Euphausia mutica	E. mutica-recurva furcilia larvae	Euphausia recurva	Thysanopoda aequalis
21a)				199		
22				5		
25				95		
32	155 (26, 78, 51)		24 (24, 0, 0)	52	103 (103, 0, 0)	
39			3 (3, 0, 0)			
41	8 (0, 8, 0)					
43	53 (0, 53, 0)	3 (0, 3, 0)		745		
47	4 (0, 4, 0)					
48	38 (0, 19, 19)					19 (0, 0, 19)
49	37 (23, 14, 0)					2 (0, 2, 0)
54	21 (19, 2, 0)					
55	24 (0, 12, 12)			24		
56	6 (0, 6, 0)			15		
57		2 (2, 0, 0)				6 (0, 4, 2)
59	2 (2, 0, 0)					
60				7		
61						2 (0, 0, 2)
63	5 (5, 0, 0)				2 (2, 0, 0)	
64	7 (7, 0, 0)					
66	48 (48, 0, 0)					
68				5		2 (0, 0, 2)
71	2 (2, 0, 0)					
72	9 (0, 9, 0)	2 (0, 2, 0)	2 (0, 2, 0)		7 (2, 5, 0)	
73	5 (0, 5, 0)				12	
74	2 (2, 0, 0)					
75				12		2 (0, 2, 0)
76		3 (0, 3, 0)				
77				113		
78						224 (0, 129, 95)
79		3 (0, 3, 0)		23		8 (0, 0, 8)
80		33 (0, 3, 30)		3		3 (0, 3, 0)
81		20 (0, 0, 20)		3		
82		3 (0, 3, 0)				10 (0, 0, 10)
85	3 (3, 0, 0)					
87	5 (5, 0, 0)					
88	60 (0, 60, 0)	3 (0, 3, 0)		20	10 (0, 10, 0)	
89	6 (3, 3, 0)	13 (13, 0, 0)				31 (31, 0, 0)
91						6 (0, 6, 0)
94	11 (0, 11, 0)			19		
96	38 (0, 38, 0)			96		19 (0, 0, 19)
97	3 (0, 3, 0)	3 (0, 3, 0)		13	3 (3, 0, 0)	
98	2 (0, 2, 0)					2 (2, 0, 0)
99	6 (0, 6, 0)	105 (0, 105, 0)				
100		14 (10, 4, 0)				42 (25, 5, 12)
102		42 (0, 42, 0)				
104		16 (0, 16, 0)				29 (0, 13, 16)
105		3 (0, 3, 0)				
109	11 (3, 3, 5)					
110	81 (0, 76, 5)					
111	97 (94, 3, 0)					
113						2 (2, 0, 0)

a) Stations omitted because none of species listed were present.

Table B-1, continued

CLOSING NET (Section II)
(ca. 280-140 m)

Station	Euphausia gibboides	Euphausia hemigibba	Euphausia mutica	E. mutica-recurva furcilia larvae	Euphausia recurva	Thysanopoda aequalis
114		2 (0, 2, 0)				2 (0, 0, 2)
115		2 (0, 0, 2)				
116		38 (0, 0, 38)				
119	81 (0, 81, 0)	2 (0, 0, 2)			14	
120	59 (7, 52, 0)	26 (26, 0, 0)	4 (0, 4, 0)	13	26	1 (0, 1, 0)
121	2 (2, 0, 0)					
122	154 (0, 139, 15)	2 (0, 0, 2)		92		
128		4 (0, 4, 0)				2 (2, 0, 0)
129		16 (8, 8, 0)				4 (2, 2, 0)
130						6 (4, 2, 0)
131						18 (6, 12, 0)
133	3 (3, 0, 0)					
134	24 (0, 12, 12)					
137			35 (35, 0, 0)			
138						14 (4, 10, 0)
139	2 (0, 2, 0)	11 (0, 11, 0)	11 (11, 0, 0)	11		11 (0, 11, 0)
140		41 (17, 24, 0)				14 (12, 2, 0)
141			2 (2, 0, 0)			
143	2 (0, 2, 0)					
145	62 (2, 48, 12)				2 (0, 2, 0)	
146				62	2 (0, 2, 0)	2 (0, 2, 0)
147				471		2 (0, 2, 0)
148	4 (2, 2, 0)					
150				11		4 (4, 0, 0)
151		68 (5, 45, 18)		208		47 (20, 27, 0)
152		2 (0, 0, 2)		14		
153		2 (0, 0, 2)		2		2 (0, 0, 2)
154		33 (0, 22, 11)	86 (0, 86, 0)	302		4 (0, 4, 0)
156						2 (2, 0, 0)
157						7 (7, 0, 0)
157B						52 (50, 2, 0)
158		2 (0, 2, 0)				

Table B-1, continued

UPPER NET (Section III)
(ca. 140-0 m)

Station	Nematobrachion flexipes	Nematoscelis tenella	Nyctiphanes simplex	Stylocheiron longicorne	Stylocheiron maximum	Thysanopoda orientalis
2					3 (0, 3, 0)	
4					4 (0, 2, 2)	
5					17 (0, 6, 11)	
7					4 (0, 0, 4)	
8				4 (0, 4, 0)		
9					* (0, 1, 0)	
11					2 (0, 0, 2)	
13	9 (0, 9, 0)			* (3, 1, 0)		
18	5 (0, 5, 0)				3 (0, 3, 0)	
19	* (0, 5, 0)					
20	13 (0, 13, 0)			3 (0, 3, 0)	3 (0, 3, 0)	
22					8 (0, 0, 8)	
23	* (0, 1, 0)			* (0, 27, 0)		
23.5				4 (2, 2, 0)		
29				7 (0, 7, 0)		
30	3 (0, 3, 0)				5 (0, 0, 5)	
32				208 (0, 153, 65)	14 (0, 2, 12)	2 (2, 0, 0)
34			(Does not occur before Station 69)	2 (0, 2, 0)		
35				10 (0, 10, 0)		
36	7 (0, 7, 0)					
37				14 (0, 14, 0)	7 (0, 7, 0)	
38				2 (0, 0, 2)	2 (0, 0, 2)	
39	5 (0, 5, 0)	3 (0, 3, 0)		41 (10, 31, 0)	3 (0, 0, 3)	
40		7 (0, 0, 7)				
40.5	9 (2, 7, 0)	9 (9, 0, 0)		279 (14, 265, 0)	14 (0, 0, 14)	6 (0, 6, 0)
41		2 (0, 2, 0)		27 (0, 27, 0)		4 (0, 0, 4)
42	12 (0, 10, 2)	55 (29, 26, 0)		42 (2, 40, 0)	2 (0, 0, 2)	2 (0, 2, 0)
42.5		107 (0, 94, 13)				
43		93 (0, 24, 69)				
43-25				156 (0, 156, 0)		
41-59		63 (0, 63, 0)		2 (0, 2, 0)		2 (0, 2, 0)
44				8 (0, 8, 0)	5 (0, 5, 0)	
45				3 (0, 3, 0)		
46				84 (0, 84, 0)		
47				121 (0, 109, 12)	2 (0, 0, 2)	
48		9 (0, 0, 9)		26 (7, 19, 0)	5 (0, 0, 5)	
49		5 (0, 5, 0)		4 (2, 2, 0)	2 (0, 0, 2)	
50				3 (0, 3, 0)		
51				5 (0, 5, 0)		
52				171 (0, 171, 0)		
53	3 (0, 3, 0)			98 (0, 98, 0)	3 (0, 3, 0)	
54				31 (0, 14, 17)		
56		205 (0, 29, 176)				
57	2 (0, 2, 0)	25 (0, 25, 0)		45 (0, 45, 0)		
57.5		43 (0, 26, 17)			34 (0, 0, 34)	
58		63 (0, 0, 63)		17 (0, 4, 13)		
58.5		15 (0, 15, 0)		38 (0, 38, 0)		
59	2 (0, 2, 0)	136 (0, 125, 11)		13 (0, 13, 0)		
60		48 (0, 24, 24)		2 (0, 0, 2)		
63				3 (0, 3, 0)		
64				31 (0, 31, 0)		* (0, 1, 0)
65				2 (0, 2, 0)		

Table B-1, continued

UPPER NET (Section III)
(ca. 140-0 m)

Station	Nematobrachion flexipes	Nematoscelis tenella	Nyctiphanes simplex	Stylocheiron longicorne	Stylocheiron maximum	Thysanopoda orientalis
66	2 (0, 2, 0)			355 (0, 355, 0)		
67		10 (0, 5, 5)				
68		92 (0, 2, 90)		36 (0, 18, 18)		
69			53 (0, 35, 18)	35 (0, 35, 0)		
70			212 (30, 91, 91)	3 (0, 3, 0)		
71				116 (0, 116, 0)		
72		2 (0, 2, 0)		7 (0, 7, 0)	2 (0, 0, 2)	
73				183 (0, 183, 0)		
74	9 (0, 9, 0)	5 (0, 5, 0)		148 (0, 148, 0)		
75		24 (0, 12, 12)				
76	3 (0, 3, 0)	168 (0, 56, 112)		28 (0, 28, 0)		
77		95 (0, 95, 0)				
77.5		21 (0, 15, 6)		62 (0, 62, 0)	2 (0, 0, 2)	
78	* (1, 0, 0)	38 (0, 38, 0)				
78.5		13 (0, 13, 0)		2 (0, 2, 0)		
79		18 (0, 18, 0)				
79.5		15 (0, 11, 4)		2 (0, 2, 0)		9 (0, 0, 9)
80		3 (0, 3, 0)		3 (0, 3, 0)	3 (0, 0, 3)	
80.5		99 (0, 75, 24)		73 (0, 73, 0)	2 (0, 0, 2)	
81		46 (0, 20, 26)		3 (0, 3, 0)		
81.5	4 (2, 2, 0)	2 (0, 2, 0)		2 (0, 2, 0)		
82		13 (0, 13, 0)				* (0, 1, 0)
83			54 (0, 0, 54)			
84			55 (0, 30, 25)			
85				24 (0, 24, 0)		* (0, 1, 0)
86	5 (5, 0, 0)			26 (0, 26, 0)	3 (0, 3, 0)	
87				222 (0, 222, 0)	3 (0, 0, 3)	
88		23 (0, 3, 20)		100 (0, 100, 0)		
89	3 (0, 3, 0)	72 (3, 23, 46)			8 (0, 0, 8)	
90	3 (0, 3, 0)	40 (0, 40, 0)		40 (0, 40, 0)		
91	5 (5, 0, 0)	15 (0, 15, 0)				
92			2 (0, 0, 2)			
93			46 (8, 19, 19)	37 (0, 37, 0)	3 (0, 3, 0)	
94			3 (0, 0, 3)	3 (0, 3, 0)		
95	5 (0, 5, 0)			5 (0, 5, 0)	5 (0, 5, 0)	
96		9 (0, 9, 0)		19 (0, 19, 0)		
97		26 (0, 13, 13)		13 (0, 13, 0)		
98		9 (0, 9, 0)		2 (0, 2, 0)		
99		3 (0, 3, 0)				
100		12 (0, 7, 5)				
101		3 (0, 3, 0)			10 (0, 0, 10)	
101.5		33 (0, 33, 0)				
102		14 (0, 14, 0)				
102.5		16 (0, 16, 0)			2 (0, 0, 2)	
103		4 (0, 2, 2)		85 (0, 71, 14)	10 (0, 10, 0)	2 (0, 0, 2)
103.5				5 (0, 5, 0)		
104.5		9 (0, 9, 0)		18 (0, 9, 9)	5 (0, 0, 5)	
105.5		18 (0, 18, 0)				
106		6 (0, 6, 0)		28 (0, 28, 0)	14 (0, 0, 14)	
106-82				2 (0, 0, 2)		
107			153 (75, 75, 3)	25 (0, 25, 0)		
108			104 (35, 17, 52)	17 (0, 17, 0)	7 (0, 0, 7)	
109	5 (0, 5, 0)		10 (10, 0, 0)		8 (0, 3, 5)	
110			583 (0, 0, 583)	5 (0, 5, 0)	8 (0, 0, 8)	

Table B-1, continued

UPPER NET (Section III)
(ca. 140-0 m)

Station	Nematobrachion flexipes	Nematoscelis tenella	Nyctiphanes simplex	Stylocheiron longicorne	Stylocheiron maximum	Thysanopoda orientalis
111	22 (0, 0, 22)			3 (0, 3, 0)		
112	2 (0, 0, 2)					
113		18 (2, 16, 0)		14 (0, 0, 14)		
114		4 (0, 4, 0)		114 (0, 101, 13)		
115	2 (2, 0, 0)	2 (0, 2, 0)			2 (0, 0, 2)	
118	6 (0, 2, 4)		14 (2, 12, 0)	6 (0, 6, 0)	4 (0, 0, 4)	
119	26 (0, 0, 26)	2 (0, 2, 0)		25 (0, 25, 0)		
120				4 (0, 4, 0)	2 (0, 0, 2)	
121	2 (0, 0, 2)	2 (0, 2, 0)				
122		27 (0, 18, 9)				
123	13 (0, 0, 13)	26 (0, 26, 0)		* (0, 9, 0)		
124				66 (0, 33, 33)		2 (0, 0, 2)
125	4 (0, 4, 0)	11 (0, 11, 0)		22 (0, 0, 22)	* (0, 1, 0)	
126.5	2 (2, 0, 0)	8 (2, 6, 0)		2 (0, 2, 0)		
127	* (1, 0, 0)	2 (0, 0, 2)				
128		21 (0, 2, 19)				
128.5		10 (0, 2, 8)		8 (0, 0, 8)		
129	4 (2, 2, 0)	2 (0, 2, 0)				
129.5		2 (0, 2, 0)		21 (2, 19, 0)	2 (0, 0, 2)	
130		2 (0, 2, 0)				
131	2 (0, 2, 0)	10 (0, 10, 0)				
131.5		26 (0, 13, 13)				
132			480 (0, 343, 137)	5 (0, 5, 0)		
133	40 (6, 0, 34)		35 (0, 35, 0)			
134		2 (0, 0, 2)				
135	8 (0, 4, 4)					
136	160 (2, 18, 140)	2 (0, 2, 0)		18 (0, 18, 0)	*	
137				19 (0, 0, 19)		
138		6 (0, 0, 6)				
140	2 (0, 2, 0)	4 (0, 4, 0)			12 (0, 0, 12)	
141		9 (0, 9, 0)				
142	2 (0, 0, 2)		33 (9, 22, 2)			
143	29 (0, 0, 29)		6 (0, 6, 0)	13 (0, 13, 0)	2 (0, 2, 0)	
144	42 (0, 5, 37)			159 (0, 159, 0)	12 (0, 0, 12)	
145	80 (0, 8, 72)	2 (0, 0, 2)				
146	12 (0, 0, 12)					
147		* (0, 5, 0)				* (1, 0, 0)
148	4 (0, 2, 2)					
149	2 (0, 2, 0)	* (1, 0, 0)		* (0, 11, 0)	* (1, 0, 0)	
150		2 (0, 2, 0)				
152		2 (0, 2, 0)				
152.5		13 (0, 13, 0)		13 (0, 0, 13)		2 (0, 0, 2)
153		2 (0, 0, 2)				* (0, 0, 1)
153.5						2 (0, 2, 0)
154		4 (0, 4, 0)				2 (0, 2, 0)
155		18 (0, 18, 0)				
155.5		4 (0, 4, 0)			11 (0, 0, 11)	
156		34 (0, 17, 17)				
157		28 (0, 7, 21)				
157A		22 (0, 0, 22)				
157C		4 (0, 4, 0)				
158			132 (0, 36, 96)			
159	6 (0, 0, 6)		9 (0, 6, 3)			
160	120 (0, 18, 102)		8 (0, 8, 0)	51 (0, 51, 0)		
161				2 (0, 2, 0)		
162		* (0, 1, 0)				

a) The species was present in the deep tow (0-700 m) taken at the station.

Table B-1, continued

CLOSING NET (Section III)
(ca. 280–140 m)

Station	Nematobrachion flexipes	Nematoscelis tenella	Nyctiphanes simplex	Stylocheiron longicorne	Stylocheiron maximum	Thysanopoda orientalis
4a)					2 (0, 2, 0)	
5					33 (0, 0, 33)	
14				12 (9, 3, 0)	3 (0, 3, 0)	
15				2 (0, 2, 0)	2 (0, 2, 0)	
16	7 (0, 0, 7)			2 (0, 2, 0)	2 (0, 2, 0)	
19				2 (2, 0, 0)	2 (0, 0, 2)	
20				8 (0, 8, 0)	6 (3, 3, 0)	
21	2 (0, 0, 2)			144 (0, 126, 18)	2 (0, 0, 2)	
22	3 (0, 3, 0)			81 (0, 43, 38)	3 (0, 0, 3)	
25				3 (0, 0, 3)		
29	2 (0, 2, 0)					
31				23 (0, 23, 0)		
32	21 (0, 21, 0)	52 (0, 26, 26)		281 (0, 281, 0)	2 (0, 0, 2)	
34				2 (0, 2, 0)		
35				3 (0, 3, 0)		
36				2 (2, 0, 0)		
37				265 (0, 265, 0)	10 (0, 10, 0)	
38				42 (0, 42, 0)		
39				377 (18, 269, 90)		10 (0, 10, 0)
40				209 (0, 150, 59)	2 (0, 0, 2)	2 (0, 0, 2)
41	2 (0, 0, 2)			643 (2, 626, 15)	2 (0, 0, 2)	2 (0, 2, 0)
43	3 (0, 0, 3)			213 (0, 186, 27)	3 (0, 0, 3)	3 (0, 3, 0)
45	3 (0, 3, 0)			87 (13, 74, 0)		
46	4 (0, 4, 0)			75 (25, 50, 0)	2 (0, 2, 0)	
47				77 (0, 58, 19)		
48	2 (0, 2, 0)					2 (0, 0, 2)
49	19 (0, 19, 0)	12 (0, 12, 0)		105 (0, 93, 12)	11 (0, 2, 9)	
53				52 (0, 52, 0)	5 (0, 0, 5)	
54				19 (0, 19, 0)		
55				72 (0, 60, 12)	2 (0, 0, 2)	2 (0, 0, 2)
56		4 (0, 4, 0)		46 (4, 38, 4)	19 (0, 6, 13)	2 (0, 2, 0)
57	5 (0, 5, 0)	7 (0, 7, 0)		36 (0, 36, 0)	14 (0, 7, 7)	
58				42 (0, 40, 2)	4 (0, 2, 2)	
59		9 (5, 4, 0)		14 (0, 14, 0)		2 (0, 0, 2)
60				60 (0, 34, 26)	5 (0, 0, 5)	
61				90 (0, 70, 20)	2 (0, 0, 2)	
64				64 (0, 64, 0)		
65				53 (0, 53, 0)		
66				184 (2, 182, 0)	6 (0, 2, 4)	2 (0, 2, 0)
67				80 (0, 80, 0)	3 (0, 0, 3)	
68				9 (0, 7, 2)		
71				42 (0, 42, 0)		
72	2 (0, 2, 0)			153 (0, 85, 68)	2 (0, 0, 2)	
73				210 (2, 48, 160)	5 (0, 0, 5)	
74	4 (0, 2, 2)	2 (2, 0, 0)		258 (2, 256, 0)	7 (0, 7, 0)	
75				17 (0, 17, 0)		
76	6 (0, 3, 3)	3 (0, 3, 0)		79 (6, 70, 3)	6 (0, 0, 6)	
77				83 (0, 75, 8)	13 (0, 0, 13)	
78		57 (0, 38, 19)		152 (0, 95, 57)		2 (0, 0, 2)
79		3 (0, 3, 0)		46 (0, 31, 15)		3 (0, 0, 3)
80				63 (0, 53, 10)	3 (0, 0, 3)	8 (0, 0, 8)
81				56 (0, 36, 20)		3 (0, 0, 3)

(Does not occur before Station 143)

a) Stations omitted because none of species listed were present.

Table B-1, continued

CLOSING NET (Section III)
(ca. 280–140 m)

Station	Nematobrachion flexipes	Nematoscelis tenella	Nyctiphanes simplex	Stylocheiron longicorne	Stylocheiron maximum	Thysanopoda orientalis
82		3 (0, 3, 0)		90 (0, 40, 50)		
86		3 (0, 3, 0)		68 (5, 47, 16)		
87				71 (0, 27, 44)	2 (0, 0, 2)	
88	3 (0, 0, 3)			38 (0, 18, 20)	3 (0, 0, 3)	
89		51 (0, 51, 0)		62 (0, 62, 0)	13 (0, 8, 5)	
90		3 (3, 0, 0)		6 (0, 6, 0)		
91	5 (0, 5, 0)	10 (0, 10, 0)		136 (0, 136, 0)	3 (0, 3, 0)	
93				53 (0, 53, 0)	26 (0, 13, 13)	
94				3 (0, 3, 0)		
95				19 (3, 8, 8)	3 (0, 0, 3)	
96				16 (0, 16, 0)	3 (0, 3, 0)	
97				27 (0, 24, 3)	3 (0, 0, 3)	
99					3 (0, 0, 3)	
100		9 (0, 9, 0)		98 (0, 88, 10)		2 (0, 0, 2)
101				115 (0, 42, 73)	3 (0, 0, 3)	
102				71 (0, 71, 0)	6 (0, 0, 6)	9 (0, 0, 9)
104				23 (0, 23, 0)		
108	2 (0, 0, 2)			44 (7, 35, 2)	14 (0, 4, 10)	
109	3 (0, 3, 0)			23 (5, 18, 0)	10 (0, 5, 5)	
110				40 (0, 21, 19)		
111	6 (0, 3, 3)	3 (3, 0, 0)		64 (6, 58, 0)	9 (3, 3, 3)	3 (0, 3, 0)
112	2 (0, 0, 2)	2 (2, 0, 0)		9 (0, 7, 2)	2 (0, 0, 2)	
113	4 (2, 0, 2)	4 (0, 4, 0)		57 (0, 55, 2)	2 (0, 0, 2)	2 (2, 0, 0)
115		4 (4, 0, 0)		138 (0, 124, 14)		
116				126 (0, 101, 25)	5 (0, 0, 5)	
119				2 (0, 2, 0)		
120		6 (2, 4, 0)		13 (0, 13, 0)	2 (0, 0, 2)	
121	2 (2, 0, 0)			26 (0, 26, 0)		2 (0, 0, 2)
122				9 (0, 9, 0)		
124				20 (0, 20, 0)	4 (0, 0, 4)	
125				4 (0, 4, 0)		
127				28 (0, 19, 9)	2 (0, 0, 2)	
128		6 (0, 6, 0)		114 (0, 114, 0)	2 (0, 2, 0)	
129		10 (2, 8, 0)		25 (0, 25, 0)		
130	2 (2, 0, 0)	8 (2, 6, 0)		74 (0, 74, 0)	10 (0, 2, 8)	
131		8 (0, 8, 0)		24 (0, 24, 0)		1 (0, 1, 0)
132	9 (0, 3, 6)					
133				26 (0, 20, 6)		
134	6 (0, 0, 6)			95 (0, 72, 23)	8 (0, 8, 0)	
137	4 (2, 2, 0)	2 (2, 0, 0)		28 (14, 14, 0)		
138		4 (0, 4, 0)		40 (0, 40, 0)		
139				21 (0, 21, 0)		
140	7 (0, 7, 0)	14 (0, 14, 0)		24 (0, 24, 0)		
141	11 (0, 11, 0)	15 (0, 15, 0)		87 (0, 87, 0)	11 (0, 0, 11)	2 (0, 2, 0)
142				6 (0, 6, 0)		
143	51 (0, 17, 34)		50 (0, 50, 0)	6 (2, 4, 0)		
144	4 (0, 2, 2)			84 (24, 60, 0)	5 (0, 0, 5)	
145	16 (0, 4, 12)			108 (12, 96, 0)	30 (0, 0, 30)	2 (0, 0, 2)
146	27 (0, 18, 9)			14 (0, 12, 2)		
147	7 (0, 0, 7)			68 (0, 45, 23)	16 (0, 5, 11)	
148	2 (0, 0, 2)			9 (0, 7, 2)		
150	4 (0, 4, 0)	2 (0, 2, 0)		35 (0, 35, 0)	4 (0, 0, 4)	
151		7 (0, 7, 0)		9 (0, 9, 0)	2 (0, 0, 2)	2 (0, 2, 0)
152				19 (0, 17, 2)		

Table B-1, continued

CLOSING NET (Section III)
(ca. 280-140 m)

Station	Nematobrachion flexipes	Nematoscelis tenella	Nyctiphanes simplex	Stylocheiron longicorne	Stylocheiron maximum	Thysanopoda orientalis
153				216 (0, 151, 65)	2 (0, 0, 2)	
154				15 (0, 15, 0)	2 (0, 0, 2)	
155	2 (0, 2, 0)	5 (5, 0, 0)		102 (0, 57, 45)		5 (0, 5, 0)
156		7 (0, 7, 0)		75 (2, 73, 0)	2 (0, 2, 0)	
157		19 (9, 10, 0)		37 (23, 14, 0)	2 (0, 2, 0)	
157B		2 (0, 2, 0)		19 (0, 19, 0)		
158	26 (0, 2, 24)					
159	6 (0, 3, 3)					
160	3 (0, 0, 3)			5 (0, 5, 0)		
161	24 (0, 5, 19)					
162	8 (0, 0, 8)					

Table B-1, continued

UPPER NET (Section IV)
(ca. 140–0 m)

Station	Euphausia brevis	Nematoscelis atlantica	Stylocheiron abbreviatum	Stylocheiron carinatum	Stylocheiron suhmi	Thysanopoda monacantha
40a)			12 (5, 0, 7)			
40.5			19 (5, 0, 14)			
41			13 (0, 0, 13)			
42			4 (0, 2, 2)			
42.5		66 (0, 13, 53)	40 (0, 0, 40)	75 (8, 40, 27)		
43		* (0, 1, 1)	64 (0, 5, 59)	3 (3, 0, 0)		
43-25		3 (0, 0, 3)	3 (0, 0, 3)			
41-59		25 (0, 0, 25)	26 (0, 0, 26)	176 (13, 38, 125)	4 (2, 2, 0)	
48			2 (0, 0, 2)			
49		42 (0, 14, 28)	49 (5, 30, 14)	30 (16, 14, 0)	2 (2, 0, 0)	
55		14 (0, 0, 14)	43 (0, 0, 43)	2 (2, 0, 0)		
56		46 (0, 2, 44)	30 (0, 0, 30)	32 (2, 15, 15)	2 (2, 0, 0)	6 (0, 0, 6)
57	149 (36, 45, 68)	46 (0, 46, 0)	52 (7, 0, 45)	676 (180, 68, 428)	136 (113, 23, 0)	7 (0, 0, 7)
57.5		6 (0, 6, 0)	85 (0, 34, 51)	85 (34, 34, 17)	17 (17, 0, 0)	
58		27 (2, 0, 25)	113 (0, 25, 88)	427 (125, 38, 264)	25 (0, 25, 0)	
58.5		51 (0, 13, 38)	38 (0, 0, 38)	494 (38, 89, 367)	64 (13, 51, 0)	2 (0, 0, 2)
59		45 (0, 22, 23)	59 (0, 2, 57)	420 (102, 136, 182)		2 (0, 0, 2)
60		2 (0, 2, 0)	7 (0, 5, 2)	275 (36, 48, 191)	2 (2, 0, 0)	2 (0, 0, 2)
61		19 (0, 17, 2)	90 (0, 15, 75)	497 (124, 174, 199)	2 (0, 2, 0)	2 (0, 0, 2)
68		20 (0, 20, 0)	54 (0, 0, 54)	375 (14, 0, 361)		9 (0, 0, 9)
72			2 (0, 0, 2)			2 (0, 0, 2)
75	49 (0, 0, 49)	62 (0, 37, 25)	12 (0, 2, 10)	62 (12, 25, 25)	49 (37, 12, 0)	
76	115 (3, 28, 84)	112 (0, 112, 0)	67 (11, 0, 56)	266 (14, 56, 196)	112 (0, 112, 0)	14 (0, 0, 14)
77	90 (0, 0, 90)	19 (3, 11, 5)	90 (0, 30, 60)	242 (30, 91, 121)	91 (0, 91, 0)	5 (0, 0, 5)
77.5	46 (0, 0, 46)	34 (2, 15, 17)	33 (0, 2, 31)	246 (15, 92, 139)	76 (15, 46, 15)	6 (0, 0, 6)
78	38 (0, 0, 38)	42 (0, 42, 0)	38 (0, 0, 38)	190 (38, 76, 76)	362 (38, 305, 19)	76 (0, 0, 76)
78.5		73 (2, 25, 46)	23 (0, 8, 15)	793 (70, 0, 723)	116 (23, 93, 0)	10 (0, 0, 10)
79	3 (3, 0, 0)	58 (0, 23, 35)	71 (0, 0, 71)	459 (36, 194, 229)	88 (53, 35, 0)	16 (0, 0, 16)
79.5	385 (44, 20, 321)	24 (4, 11, 9)	26 (0, 4, 22)	180 (40, 100, 40)	80 (40, 40, 0)	7 (0, 0, 7)
80		40 (0, 0, 40)	21 (3, 5, 13)	3 (0, 0, 3)	70 (10, 40, 20)	* (0, 0, 2)
80.5	439 (24, 97, 318)	26 (26, 0, 0)	36 (12, 0, 24)	488 (220, 122, 146)	98 (49, 49, 0)	7 (0, 2, 5)
81	26 (0, 0, 26)	8 (0, 8, 0)	29 (0, 3, 26)	153 (102, 0, 51)	54 (51, 3, 0)	5 (0, 0, 5)
81.5	1130 (168, 457, 505)	82 (10, 24, 48)	55 (7, 0, 48)	600 (144, 0, 456)	72 (24, 48, 0)	2 (0, 0, 2)
82	25 (0, 0, 25)	69 (0, 56, 13)	5 (0, 5, 0)	368 (16, 251, 101)	5 (5, 0, 0)	5 (0, 0, 5)
88		65 (0, 25, 40)	40 (0, 0, 40)	* (1, 0, 0)		
89	31 (5, 26, 0)	11 (0, 11, 0)	8 (0, 0, 8)	44 (31, 5, 8)	69 (23, 0, 46)	3 (0, 0, 3)
90	345 (26, 60, 259)	43 (0, 23, 20)	60 (0, 0, 60)	188 (9, 60, 119)	219 (80, 139, 0)	20 (0, 0, 20)
91	181 (68, 113, 0)	166 (8, 113, 45)	59 (3, 10, 46)	51 (28, 23, 0)	227 (91, 113, 23)	3 (0, 0, 3)
96			38 (0, 0, 38)	3 (0, 3, 0)	95 (38, 38, 19)	3 (0, 0, 3)
97	9 (0, 0, 9)	39 (0, 26, 13)	16 (0, 0, 16)	26 (13, 0, 13)	144 (66, 52, 26)	
98	436 (48, 388, 0)	34 (0, 18, 16)	48 (0, 0, 48)	113 (97, 16, 0)	210 (32, 162, 16)	12 (0, 0, 12)
99	13 (0, 13, 0)	9 (0, 6, 3)	13 (0, 0, 13)	65 (13, 26, 26)	104 (52, 52, 0)	3 (0, 0, 3)
100	17 (0, 17, 0)	20 (0, 5, 15)	17 (0, 0, 17)	64 (5, 15, 44)	17 (2, 15, 0)	2 (0, 0, 2)
101	31 (0, 0, 31)	13 (0, 3, 10)	63 (0, 0, 63)	55 (3, 0, 52)	52 (10, 42, 0)	
101.5		2 (0, 2, 0)	20 (0, 10, 10)	56 (27, 19, 10)	78 (10, 68, 0)	6 (0, 4, 2)
102	14 (0, 0, 14)	14 (0, 14, 0)	28 (0, 14, 14)	127 (14, 113, 0)	113 (28, 85, 0)	28 (0, 0, 28)
102.5	23 (0, 0, 23)	16 (0, 16, 0)	14 (0, 12, 2)	84 (2, 59, 23)	59 (35, 12, 12)	8 (0, 0, 8)
103	60 (2, 29, 29)	2 (2, 0, 0)	31 (2, 0, 29)	45 (7, 14, 24)	43 (14, 29, 0)	2 (2, 0, 0)
103.5		4 (0, 2, 2)	5 (0, 0, 5)	198 (105, 81, 12)	46 (0, 46, 0)	12 (0, 0, 12)
104	3 (0, 0, 3)			21 (5, 5, 11)		
104.5	66 (0, 0, 66)	28 (0, 9, 19)	21 (0, 2, 19)	206 (56, 103, 47)	18 (9, 9, 0)	2 (0, 0, 2)
105	104 (25, 59, 20)	29 (6, 23, 0)	45 (6, 0, 39)	451 (196, 98, 157)	39 (0, 39, 0)	48 (0, 45, 3)

a) Stations omitted because none of species listed were present.

Table B-1, continued

UPPER NET (Section IV)
(ca. 140-0 m)

Station	Euphausia brevis	Nematoscelis atlantica	Stylocheiron abbreviatum	Stylocheiron carinatum	Stylocheiron suhmi	Thysanopoda monacantha
105.5	109 (0, 0, 109)	33 (0, 2, 31)	4 (0, 4, 0)	482 (124, 264, 94)	31 (0, 31, 0)	2 (0, 0, 2)
106	197 (28, 155, 14)	25 (0, 11, 14)	53 (0, 25, 28)	495 (198, 142, 155)	99 (28, 71, 0)	3 (0, 0, 3)
106-82	65 (0, 0, 65)	81 (0, 16, 65)	23 (0, 9, 14)	162 (32, 81, 49)	18 (16, 2, 0)	
110					5 (0, 5, 0)	
111			3 (0, 3, 0)			
112	19 (0, 19, 0)		* (0, 1, 0)	* (6, 0, 0)	113 (38, 75, 0)	
113	110 (55, 55, 0)	26 (5, 21, 0)		5 (5, 0, 0)	179 (138, 41, 0)	
114	10 (0, 0, 10)	30 (0, 20, 10)	4 (0, 0, 4)	31 (21, 0, 10)	41 (21, 10, 10)	6 (0, 0, 6)
115	160 (32, 80, 48)	4 (2, 2, 0)	39 (0, 5, 34)	48 (48, 0, 0)	177 (80, 97, 0)	
116		3 (0, 0, 3)	3 (0, 0, 3)	36 (10, 13, 13)	94 (23, 71, 0)	3 (0, 0, 3)
118			2 (2, 0, 0)			
119					25 (0, 25, 0)	
120		6 (0, 4, 2)	2 (0, 0, 2)		92 (31, 61, 0)	
121	2 (2, 0, 0)					
122					36 (9, 27, 0)	
123	329 (145, 171, 13)	2 (0, 2, 0)	7 (7, 0, 0)	28 (2, 13, 13)	158 (79, 79, 0)	
124	22 (0, 0, 22)		2 (0, 2, 0)	35 (2, 11, 22)	163 (54, 65, 44)	2 (0, 0, 2)
125	120 (55, 43, 22)	11 (0, 11, 0)	88 (0, 33, 55)	87 (33, 43, 11)	239 (43, 153, 43)	8 (0, 0, 8)
126			2 (0, 2, 0)	178 (7, 133, 38)	285 (76, 171, 38)	14 (0, 0, 14)
126.5	126 (63, 63, 0)	2 (2, 0, 0)	13 (4, 4, 5)	238 (163, 25, 50)	388 (250, 113, 25)	
127		4 (0, 4, 0)	15 (0, 0, 15)	35 (35, 0, 0)	35 (9, 26, 0)	* (1, 0, 0)
127.5	52 (13, 39, 0)	2 (0, 2, 0)	75 (0, 23, 52)	362 (142, 181, 39)	555 (155, 387, 13)	4 (0, 2, 2)
128	37 (9, 19, 9)	27 (0, 27, 0)	18 (0, 18, 0)	727 (359, 208, 160)	434 (57, 358, 19)	
128.5	2 (2, 0, 0)	4 (0, 2, 2)	24 (0, 0, 24)	86 (47, 8, 31)	16 (8, 8, 0)	
129	163 (50, 88, 25)	13 (0, 13, 0)	91 (0, 40, 51)	415 (101, 226, 88)	251 (50, 163, 38)	2 (0, 0, 2)
129.5		23 (0, 23, 0)	4 (0, 2, 2)	139 (39, 33, 67)	150 (50, 100, 0)	4 (0, 0, 4)
130	60 (10, 50, 0)	104 (0, 102, 2)	27 (0, 27, 0)	935 (738, 148, 49)	123 (25, 98, 0)	4 (0, 4, 0)
130.5	2 (2, 0, 0)	2 (0, 2, 0)	4 (2, 2, 0)	100 (73, 18, 9)	23 (5, 18, 0)	
131	100 (40, 60, 0)	32 (0, 32, 0)	22 (0, 12, 10)	222 (131, 71, 20)	283 (91, 192, 0)	
131.5	167 (64, 13, 90)	3 (0, 3, 0)	17 (2, 13, 2)	541 (438, 90, 13)	65 (13, 52, 0)	2 (0, 0, 2)
133					20 (3, 17, 0)	
134				24 (12, 12, 0)	12 (0, 12, 0)	
135			2 (0, 0, 2)	2 (2, 0, 0)	57 (19, 38, 0)	
136	105 (35, 70, 0)		2 (0, 2, 0)	2 (2, 0, 0)	53 (0, 53, 0)	
137	131 (94, 37, 0)		74 (0, 37, 37)	80 (5, 75, 0)	206 (112, 94, 0)	2 (0, 0, 2)
138	278 (60, 206, 12)	30 (0, 6, 24)	12 (0, 0, 12)	24 (12, 0, 12)	109 (36, 73, 0)	
139	57 (0, 0, 57)		11 (0, 0, 11)	19 (19, 0, 0)	89 (13, 57, 19)	2 (0, 0, 2)
140	179 (24, 143, 12)		101 (12, 5, 84)	401 (126, 191, 84)	394 (95, 263, 36)	4 (0, 0, 4)
141	166 (26, 105, 35)	17 (0, 0, 17)	54 (0, 2, 52)	139 (61, 52, 26)	183 (70, 104, 9)	
142					2 (0, 2, 0)	
145					2 (2, 0, 0)	
146			2 (0, 0, 2)			
147				11 (2, 0, 9)	18 (2, 16, 0)	
148	25 (2, 23, 0)			23 (0, 23, 0)	92 (46, 46, 0)	
149	92 (37, 0, 55)	* (1, 0, 0)	42 (0, 37, 5)	165 (55, 0, 110)	128 (110, 18, 0)	2 (0, 0, 2)
150	158 (88, 35, 35)		22 (0, 4, 18)	53 (18, 35, 0)	263 (123, 140, 0)	
151	92 (46, 23, 23)		32 (9, 0, 23)	28 (5, 0, 23)	181 (135, 23, 23)	
152	2 (0, 0, 2)		7 (0, 2, 5)	32 (7, 23, 2)	234 (70, 164, 0)	
152.5	41 (2, 39, 0)		52 (0, 13, 39)	30 (4, 13, 13)	156 (130, 26, 0)	
153			2 (0, 2, 0)	101 (58, 0, 43)	22 (12, 10, 0)	* (0, 1, 0)
153.5	30 (15, 15, 0)	2 (2, 0, 0)	4 (2, 2, 0)	126 (52, 0, 74)	89 (15, 44, 30)	
154			47 (4, 0, 43)	244 (100, 72, 72)	29 (29, 0, 0)	
154.5	25 (0, 0, 25)		12 (0, 0, 12)	137 (50, 50, 37)	87 (25, 62, 0)	4 (0, 0, 4)
155	73 (18, 55, 0)		91 (0, 0, 91)	347 (146, 91, 110)	36 (0, 36, 0)	
155.5	66 (11, 55, 0)		22 (0, 0, 22)	274 (142, 55, 77)	66 (33, 33, 0)	

Table B-1, continued

UPPER NET (Section IV)
(ca. 140-0 m)

Station	Euphausia brevis	Nematoscelis atlantica	Stylocheiron abbreviatum	Stylocheiron carinatum	Stylocheiron suhmi	Thysanopoda monacantha
156	292 (86, 86, 120)		171 (0, 17, 154)	430 (69, 172, 189)	481 (206, 206, 69)	
156.5	24 (12, 0, 12)		12 (0, 0, 12)	259 (118, 47, 94)	60 (24, 36, 0)	
157	231 (105, 126, 0)		70 (0, 28, 42)	231 (105, 21, 105)	168 (63, 105, 0)	* (1, 0, 0)
157A	76 (0, 0, 76)	2 (0, 2, 0)	10 (0, 0, 10)	175 (44, 98, 33)	109 (22, 76, 11)	
157B	228 (71, 114, 43)		2 (0, 0, 2)	230 (115, 29, 86)	100 (57, 43, 0)	
157C	30 (0, 0, 30)		21 (0, 6, 15)	46 (2, 29, 15)	73 (29, 44, 0)	
160					3 (0, 3, 0)	
162				* (1, 0, 0)		

* The species was present in the deep tow (0-700 m) taken at the station.

Table B-1, continued

CLOSING NET (Section IV)
(ca. 280–140 m)

Station	Euphausia brevis	Nematoscelis atlantica	Stylocheiron abbreviatum	Stylocheiron carinatum	Stylocheiron suhmi	Thysanopoda monacantha
43a)			3 (0, 0, 3)			
48			2 (0, 0, 2)			
49			12 (12, 0, 0)			
55			2 (2, 0, 0)			
56			2 (0, 2, 0)			
57		2 (2, 0, 0)	2 (2, 0, 0)	2 (0, 0, 2)		
59			11 (0, 11, 0)			
60			2 (2, 0, 0)			
61	20 (0, 0, 20)		2 (0, 0, 2)	15 (5, 0, 10)		
67			5 (0, 0, 5)			
68	11 (0, 0, 11)			7 (7, 0, 0)		
75	10 (0, 5, 5)	2 (0, 2, 0)	7 (0, 2, 5)	7 (5, 2, 0)	12 (12, 0, 0)	2 (0, 0, 2)
77	101 (0, 3, 98)			3 (3, 0, 0)		
78	610 (0, 229, 381)	25 (0, 6, 19)	10 (0, 6, 4)	171 (19, 38, 114)	229 (19, 210, 0)	19 (0, 0, 19)
79	143 (0, 0, 143)			11 (3, 8, 0)		
80	125 (5, 20, 100)					
81	235 (0, 0, 235)				6 (0, 3, 3)	
82	291 (0, 10, 281)					
88	3 (0, 3, 0)					
89		28 (8, 20, 0)	5 (5, 0, 0)	3 (3, 0, 0)		
91		8 (8, 0, 0)	3 (3, 0, 0)		8 (8, 0, 0)	
96	3 (0, 3, 0)	3 (0, 3, 0)	3 (0, 0, 3)		6 (6, 0, 0)	
97		3 (0, 0, 3)				
98	2 (0, 2, 0)					
99	65 (0, 65, 0)			10 (10, 0, 0)		
100	2 (0, 2, 0)					
101	136 (0, 0, 136)		8 (0, 0, 8)			
102	141 (0, 127, 14)		57 (0, 0, 57)		12 (6, 6, 0)	
104	37 (0, 37, 0)		3 (0, 0, 3)	79 (16, 16, 47)	3 (0, 3, 0)	
105	3 (3, 0, 0)			3 (0, 0, 3)		
114	38 (0, 13, 25)		2 (2, 0, 0)	4 (2, 2, 0)	4 (4, 0, 0)	
115			2 (2, 0, 0)		2 (0, 2, 0)	
116	77 (0, 0, 77)					
120	30 (0, 30, 0)					
122	2 (2, 0, 0)					
124	33 (0, 33, 0)	5 (0, 0, 5)	6 (0, 0, 6)		45 (29, 16, 0)	
127	9 (0, 0, 9)		45 (0, 2, 43)		45 (2, 43, 0)	
128		4 (0, 4, 0)	4 (0, 2, 2)	2 (2, 0, 0)	9 (9, 0, 0)	
129	8 (8, 0, 0)	8 (6, 2, 0)	21 (4, 0, 17)	2 (2, 0, 0)	50 (50, 0, 0)	
130		16 (4, 12, 0)	4 (4, 0, 0)	26 (24, 0, 2)	8 (8, 0, 0)	
131			4 (2, 0, 2)		42 (36, 6, 0)	
132				8 (0, 8, 0)		
138			2 (2, 0, 0)			
139	116 (11, 105, 0)		11 (0, 0, 11)		2 (2, 0, 0)	
140		2 (2, 0, 0)	2 (2, 0, 0)			
141			15 (13, 0, 2)		11 (0, 11, 0)	
142		4 (4, 0, 0)				
147	2 (0, 2, 0)					
150			4 (2, 2, 0)		2 (2, 0, 0)	
151	27 (0, 27, 0)	2 (0, 2, 0)	5 (5, 0, 0)		36 (36, 0, 0)	
152	12 (0, 0, 12)		4 (0, 2, 2)		2 (2, 0, 0)	
153	5 (0, 5, 0)		95 (0, 2, 93)	7 (0, 0, 7)	14 (12, 2, 0)	
154	43 (11, 32, 0)					
155			2 (0, 2, 0)			
156			27 (2, 0, 25)	136 (136, 0, 0)	49 (49, 0, 0)	
157			58 (58, 0, 0)	11 (11, 0, 0)		
157B	19 (19, 0, 0)	2 (2, 0, 0)	7 (5, 2, 0)	249 (249, 0, 0)	96 (77, 19, 0)	2 (0, 2, 0)

a) Stations omitted because none of species listed were present.

Table B-1, continued

OTHER EUPHAUSIID SPECIES

Species	Station	Upper Net (ca. 140–0 m)	Closing Net (ca. 280–140 m)	Deep Tow (0–700 m)
Bentheuphausia amblyops	12			1 (0, 1, 0)
	3			1 (0, 1, 0)
	5			1 (0, 1, 0)
	13			1 (0, 1, 0)
	21			1 (0, 1, 0)
	23			1 (0, 1, 0)
	39			1 (0, 1, 0)
	41			1 (0, 1, 0)
	43			1 (0, 1, 0)
	46			1 (0, 1, 0)
	48			1 (0, 1, 0)
	64			1 (0, 1, 0)
	78			1 (0, 1, 0)
	125			1 (0, 1, 0)
	131			1 (0, 1, 0)
Euphausia diomediae	149	2 (2, 0, 0)		2 (1, 1, 0)
	150	7 (7, 0, 0)		
	153.5	8 (8, 0, 0)		
	155	9 (0, 9, 0)	2 (2, 0, 0)	1 (1, 0, 0)
Euphausia distinguenda	135	2 (0, 0, 2)		
	143	15 (0, 15, 0)		
	144	2 (2, 0, 0)		
	145	8 (8, 0, 0)		
	149	2 (2, 0, 0)		
	153.5	8 (8, 0, 0)		
	155	2 (2, 0, 0)		
	158	24 (0, 0, 24)		
	159	110 (0, 110, 0)	6 (0, 6, 0)	
	161		31 (7, 24, 0)	
Euphausia lamelligera	143	2 (2, 0, 0)		
	158	12 (0, 12, 0)		
Euphausia paragibba	140		2 (2, 0, 0)	
	141	13 (13, 0, 0)	2 (2, 0, 0)	
	147	2 (0, 0, 2)		
	149	2 (0, 0, 2)		
	150	2 (0, 2, 0)		
	151	23 (0, 23, 0)	63 (0, 63, 0)	
	152.5	2 (2, 0, 0)		
	153			1 (1, 0, 0)
	153.5	34 (4, 30, 0)		
	155	25 (7, 18, 0)	2 (2, 0, 0)	12 (7, 5, 0)
Euphausia tenera	82	3 (0, 3, 0)	3 (0, 3, 0)	
	82–106	33 (0, 33, 0)		
	104	3 (0, 3, 0)	16 (16, 0, 0)	
	105	25 (25, 0, 0)		
	105.5	4 (0, 4, 0)		

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Table B-1, continued

OTHER EUPHAUSIID SPECIES

Species	Station	Upper Net (ca. 140-0 m)	Closing Net (ca. 280-140 m)	Deep Tow (0-700 m)
Euphausia tenera (continued)	106	85 (71, 14, 0)		
	128	9 (9, 0, 0)		
	129	17 (4, 0, 13)		
	129.5	6 (0, 6, 0)		
	130	50 (0, 25, 25)	8 (8, 0, 0)	
	131	30 (20, 10, 0)	12 (0, 12, 0)	6 (5, 1, 0)
	131.5	245 (103, 142, 0)		
	133	3 (3, 0, 0)		
	135	2 (0, 0, 2)		
	138	2 (2, 0, 0)		
	140	12 (0, 12, 0)		
	143	2 (2, 0, 0)		
	144	7 (7, 0, 0)		
	145	2 (2, 0, 0)		
	146	2 (0, 0, 2)		
	147	9 (0, 9, 0)	14 (0, 0, 14)	12 (3, 9, 0)
	148	2 (0, 2, 0)		
	149	5 (5, 0, 0)		2 (1, 1, 0)
	153			5 (5, 0, 0)
	153.5	15 (0, 15, 0)		
	154	14 (14, 0, 0)	2 (2, 0, 0)	
	154.5	12 (0, 12, 0)		
	155	2 (2, 0, 0)		1 (1, 0, 0)
	155.5	11 (0, 11, 0)		
	156	54 (2, 52, 0)		
	157			1 (1, 0, 0)
	157A	108 (0, 0, 108)		
	157B	129 (43, 86, 0)	38 (38, 0, 0)	
	157C	29 (0, 29, 0)		
	159	14 (0, 14, 0)		
	162	5 (0, 5, 0)	89 (76, 0, 13)	69 (57, 9, 3)
Nematobrachion boopis	23			1 (1, 0, 0)
	26		2 (0, 2, 0)	
	43			1 (1, 0, 0)
	82			1 (0, 1, 0)
	85		3 (0, 0, 3)	
	86			1 (0, 0, 1)
	87		2 (0, 2, 0)	
	119		2 (0, 0, 2)	
	123			1 (1, 0, 0)
	131			2 (0, 2, 0)
	134			1 (0, 1, 0)
	149			1 (0, 1, 0)
	151			1 (1, 0, 0)
	155			1 (1, 0, 0)
	157			2 (0, 1, 1)
Nematobrachion sexspinosus	128		2 (0, 2, 0)	
	131			1 (1, 0, 0)
Nematoscelis gracilis	122	2 (0, 2, 0)		
	123	2 (0, 2, 0)		
	124	33 (0, 0, 33)		

(continued on next page)

Table B-1, continued

OTHER EUPHAUSIID SPECIES

Species	Station	Upper Net (ca. 140–0 m)	Closing Net (ca. 280–140 m)	Deep Tow (0–700 m)
Nematoscelis gracilis (continued)	127	4 (0, 4, 0)		1 (0, 1, 0)
	134		4 (0, 0, 4)	6 (0, 0, 6)
	135	21 (0, 19, 2)		
	136	7 (0, 7, 0)		6 (1, 5, 0)
	137	281 (0, 281, 0)	70 (70, 0, 0)	
	138	18 (0, 6, 12)	2 (2, 0, 0)	
	139	21 (0, 2, 19)		
	140	24 (0, 0, 24)	55 (31, 24, 0)	
	141		9 (9, 0, 0)	
	142	51 (0, 7, 44)		
	143	2 (0, 2, 0)		
	144	2 (2, 0, 0)		
	145	26 (6, 2, 18)	6 (6, 0, 0)	
	146	13 (2, 9, 2)		
	147	14 (0, 7, 7)	2 (0, 2, 0)	20 (3, 12, 5)
	148	131 (9, 30, 92)	40 (35, 5, 0)	
	149	12 (0, 12, 0)		36 (10, 21, 5)
	150	57 (0, 4, 53)	9 (9, 0, 0)	
	151	69 (0, 46, 23)	2 (2, 0, 0)	7 (0, 7, 0)
	152.5	13 (0, 0, 13)		
	153	45 (0, 2, 43)	2 (0, 0, 2)	8 (7, 0, 1)
	153.5	49 (19, 0, 30)		
	154	172 (0, 57, 115)		
	154.5	73 (0, 11, 62)		
	155	18 (0, 0, 18)	4 (2, 2, 0)	2 (0, 2, 0)
	156		36 (24, 12, 0)	
	156.5	12 (0, 0, 12)		
	157			5 (1, 0, 4)
	157B	43 (0, 0, 43)	2 (0, 2, 0)	
	157C	15 (0, 0, 15)		
	158	24 (0, 12, 12)	2 (0, 2, 0)	
	159	37 (0, 3, 34)		
	160		3 (3, 0, 0)	
	161	72 (0, 0, 72)		
	162	3 (0, 3, 0)		3 (0, 0, 3)
Stylocheiron elongatum	43			1 (0, 1, 0)
	59		2 (0, 2, 0)	
	60		5 (0, 0, 5)	
	61		5 (0, 0, 5)	
	79		3 (0, 0, 3)	
	80		1 (0, 1, 0)	
	81		6 (0, 3, 3)	
	82		2 (0, 1, 1)	
	127		2 (0, 0, 2)	
	134			1 (0, 1, 0)
	137		7 (0, 7, 0)	
	138		2 (0, 0, 2)	
	146		2 (0, 2, 0)	
	149			4 (1, 3, 0)
	151			3 (1, 2, 0)
	153		2 (0, 0, 2)	2 (0, 2, 0)
	155		2 (0, 2, 0)	1 (0, 1, 0)
	157			1 (0, 1, 0)

Table B-1, continued

OTHER EUPHAUSIID SPECIES

Species	Station	Upper Net (ca. 140-0 m)	Closing Net (ca. 280-140 m)	Deep Tow (0-700 m)
Stylocheiron micropthalma	153			1 (1, 0, 0)
	153.5	19 (4, 15, 0)		
	154.5	2 (2, 0, 0)		
	156	17 (17, 0, 0)		
	157	42 (0, 42, 0)		17 (4, 13, 0)
	157C	4 (4, 0, 0)		
Thysanoessa parva	112			2 (2, 0, 0)
	136			1 (1, 0, 0)
Thysanopoda acutifrons	3			2 (0, 0, 2)
	4	2 (2, 0, 0)		
	5		3 (0, 0, 3)	
	12	2 (2, 0, 0)		
	13			3 (1, 1, 1)
	14		9 (9, 0, 0)	
	20		3 (0, 3, 0)	
	22		6 (0, 0, 6)	
	23			1 (0, 1, 0)
	25			6 (0, 6, 0)
	29			1 (0, 1, 0)
	37		12 (0, 12, 0)	
	39			4 (0, 4, 0)
	48			1 (0, 1, 0)
Thysanopoda cristata	81.5	2 (0, 2, 0)		
	154		2 (0, 0, 2)	
Thysanopoda egregia	41			1 (0, 0, 1)
	43			1 (0, 0, 1)
	56		2 (0, 0, 2)	
	67		3 (0, 0, 3)	
	131			1 (0, 0, 1)
Thysanopoda obtusifrons	57	2 (0, 0, 2)		
	76		3 (3, 0, 0)	
	77.5	2 (0, 0, 2)		
	78.5	2 (0, 0, 2)		
	79.5	2 (0, 2, 0)		
	80	8 (0, 0, 8)		2 (0, 0, 2)
	80.5	7 (5, 2, 0)		
	81	3 (0, 0, 3)		
	81.5	2 (2, 0, 0)		
	82			4 (2, 1, 1)
	82-106	5 (0, 0, 5)		
	90	40 (0, 0, 40)		
	91	19 (0, 19, 0)		
	97	6 (0, 0, 6)		
	98	9 (0, 9, 0)		
	99	8 (0, 0, 8)	3 (0, 3, 0)	
	101		3 (0, 0, 3)	
	102		6 (0, 0, 6)	
	103	4 (2, 0, 2)		
	104.5	7 (0, 0, 7)		
	114	6 (0, 0, 6)		

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Table B-1, continued

OTHER EUPHAUSIID SPECIES

Species	Station	Upper Net (ca. 140–0 m)	Closing Net (ca. 280–140 m)	Deep Tow (0–700 m)
Thysanopoda obtusifrons (continued	115	6 (2, 0, 4)	2 (2, 0, 0)	
	116	5 (0, 0, 5)	8 (0, 0, 8)	
	124	2 (0, 0, 2)		
	125	2 (0, 0, 2)		2 (0, 1, 0)
	126.5	4 (0, 2, 2)		
	127		6 (0, 0, 6)	3 (1, 1, 1)
	127.5	2 (0, 0, 2)		
	128	4 (2, 0, 2)	12 (4, 8, 0)	
	128.5	4 (0, 0, 4)		
	129	2 (0, 2, 0)	4 (2, 2, 0)	2 (1, 1, 0)
	130		10 (8, 2, 0)	
	131		2 (2, 0, 0)	2 (1, 1, 0)
	131.5	2 (0, 0, 2)		
	138	2 (0, 0, 2)	6 (6, 0, 0)	
	140	5 (0, 0, 5)	21 (0, 21, 0)	
	141	2 (0, 2, 0)	4 (4, 0, 0)	
	150		7 (7, 0, 0)	
	151	4 (0, 2, 2)		
	153.5	2 (0, 0, 2)		
	155	18 (0, 0, 18)	5 (5, 0, 0)	5 (5, 0, 0)
	156	2 (0, 0, 2)	16 (4, 0, 12)	
	157		5 (5, 0, 0)	
	157B		2 (2, 0, 0)	
Thysanopoda pectinata	78	2 (0, 0, 2)		
	79	5 (0, 0, 5)		
	79.5	2 (0, 0, 2)		
	80	3 (0, 0, 3)		
	80.5	2 (0, 2, 0)		
	81	5 (0, 0, 5)		
	91	3 (0, 3, 0)		
	100	5 (0, 0, 5)		
	103.5	12 (0, 0, 12)		
	115	2 (0, 0, 2)		
	116		3 (0, 0, 3)	
	124		16 (0, 0, 16)	
	126.5	2 (0, 0, 2)		
	128	2 (0, 0, 2)	2 (2, 0, 0)	
	129			1 (1, 0, 0)
	131		2 (0, 0, 2)	
	140	2 (0, 0, 2)		
	141	2 (0, 2, 0)		
	149	2 (0, 0, 2)		
	151	4 (0, 0, 4)		
	152.5	13 (0, 0, 13)		
	153			5 (5, 0, 0)
	154.5	2 (0, 0, 2)		
	157		2 (2, 0, 0)	
Thysanopoda tricuspidata	127			1 (0, 0, 1)
	127.5	2 (0, 2, 0)		
	131.5	6 (0, 0, 6)		
	153			4 (0, 0, 4)
	153.5	4 (0, 0, 4)		

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Table B-1, continued

OTHER EUPHAUSIID SPECIES

Species	Station	Upper Net (ca. 140-0 m)	Closing Net (ca. 280-140 m)	Deep Tow (0-700 m)
Thysanopoda tricuspidata (continued)	154	13 (0, 2, 11)		
	154.5	6 (0, 2, 4)		
	155	31 (0, 2, 29)		
	155.5	2 (0, 0, 2)		
	156	2 (0, 2, 0)		
	157	2 (0, 0, 2)		
	157B	7 (0, 0, 7)		

TABLE B-2. Numbers of salps and doliolids per 1000 m^3 at CCOFI stations. [a)]

Station	UPPER NET (ca. 140–0 m)						CLOSING NET (ca. 280–140 m)					
	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri
1							No closing haul					
2	8						No closing haul					
3	22											
4	62769						13					
5	27742						17					
6							No closing haul					
7	13						No closing haul					
8							No closing haul					
9				475			No closing haul					
10				83			No closing haul					
11				576			No closing haul					
12	18						No closing haul					
13	6						No closing haul					
14	198					9	43					
15												
16				1927		24				20		
17				170		5				14		
18				32		16						
19				406						3204		
20				300						5		
21	396		126	667						18		
22	1604			2346			15			120	5	
23	130						5					
24	41											
25	587			98								
26				14						16	5	
27	85			51		34	Missing					
28				1832			Missing					
29	120											
30							Missing					
31				53						3		
32				5					7	35		
33						12	Missing					
34				1904						10		
35	2984			1057		46						
36	2351			274		27						
37												
38												
39												
40												

a) Identified by L. Berner.

Table B-2, continued

Station	UPPER NET (ca. 140–0 m)						CLOSING NET (ca. 280–140 m)					
	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri
41	2		2									
42		5					2					
43			16291							71		
44	972			1254			Missing					
45	448			8			11			21		
46	2180			776			25					
47	10						5		10			
48	104											
49		14					Missing					
50	176						Missing					
51	21763						Missing					
52	1114						Missing					
53	1959		7011				9237					
54							7					
55												
56							2126					
57	19			5								
58		4						12	4			
59		32										
60		133										
61		219										
62	No haul by upper net											
63	2576						16					
64	4079		92									
65	3496											
66	69		13									
67		5										
68		32	19									
69				289		7	Missing					
70	2046		14			41						
71	1744		7647						112			
72	88											
73	76		7									
74	23		72947						2153			
75		14	15									
76		88	20									
77		40										
78		4			2				8	123		
79		107										
80		316										20

Table B-2, continued

Station	UPPER NET (ca. 140-0 m)						CLOSING NET (ca. 280-140 m)					
	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri
81		382						20				
82		1063	53									
83				76		33				3		
84				301		30				5		50
85				11						48		
86			6204						220			
87	29											
88		10	35									
89		38	30960						3			
90		43	26	26								
91		32	40	56		8						
92							Missing					
93		5					Missing					
94			5	132						3		
95												
96			6									
97		10	105									
98		21	28	2								
99		3	3						16	3		
100		17	12	5								
101			8									
102		3		3								Present
103	Not examined						Net did not open					
104		3		3				3				
105		34		17								
106		90	74				Missing					
107				645								
108												
109	26											
110	2534	9470						19				
111												
112		11	29									
113		14		18								
114		48	14						10			
115		9										
116		3							5			
117	Missing						Missing					
118		153		12			Missing					
119								2				
120		92	71									

Table B-2, continued

Station	UPPER NET (ca. 140–0 m)						CLOSING NET (ca. 280–140 m)					
	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri	Dolioletta gegenbauri	Doliolum denticulatum	Thalia democratica	Salpa fusiformis	Ritteriella picteti	Cyclosalpa bakeri
121		70	26	2056	2					8		
122		29	2									
123		4		2								
124		7	179						23	4		
125		13	4				Net did not appear to open					
126		24					Net did not appear to open					
127		9	44					2	2			
128		68	152	11						4		
129		81	119	25	25				92			
130		21										
131		125	24						2			
132	1604	34617				26						
133		149										
134		16						4			4	
135		169	46									
136		632	18	11	4		Missing					
137		169		2	5							
138		274	218	77				2	4	2		
139		75	107							23		
140		15	5	38								
141		27	46	92	4							
142	27	453										
143		33	27		14							
144		29		7	2							
145		227										
146		1382										
147		143		5								
148		148										
149		55	170				Net did not appear to open					
150		17	119	4					13			
151		2	284	14					36	7		
152		57	90						59			
153		39	463					5	279		5	
154		65	71							2		
155		82	191						2			
156		49	128	2								
157		91		29	5				2			
158		19	19		10							
159	8	141	75									
160		3										
161		145	116		7							
162		214	525									

Table B-2, continued

Station	UPPER NET (ca. 140–0 m)										CLOSING NET (ca. 280–140 m)									
	Salpa cylindrica	Iasis zonaria	Pegea confoederata	Ihlea punctata	Cyclosalpa pinnata quadriluminis	Cyclosalpa affinis	Thetys vagina	Doliolina sps	Doliopsis sp		Salpa cylindrica	Iasis zonaria	Pegea confoederata	Ihlea punctata	Cyclosalpa pinnata quadriluminis	Cyclosalpa affinis	Thetys vagina	Doliolina sps	Doliopsis sp	
3				7										0						
4				171										0						
13		17										0								
21		54										41								
22		201										0								
23				74										0						
25				65										0						
31				23										0						
38			2										0							
39			13										0							
43				0										18						
57				27										0						
59					27										0					
70							82										0			
85			11			48							0			0				
94			0			61							3			0				
95			13										0							
99					3										0					
105				22										0						
107			3										0							
110						8										0				
137					183										0					
142	9										0									
143	142		Present			27					35		0			0				
145	4										0									
149	23										0									
154			0										2							
155		9										0								
157	2	2									0	0								
159	16					5					110					0				
161	222										527									

(present in the area of investigation)

(present in the area of investigation)

(present in the area of investigation)

(present in the area of investigation)

TABLE B-3. Zooplankton group counts at Hugh M. Smith stations (numbers of organisms per 1000 m^3 of water strained in the upper 140 meters). [a]

Station	Foraminifera	Radiolaria	Coelenterata	Chaetognatha	Annelida	Copepoda	Ostracoda	Amphipoda	Euphausiacea	Decapoda	Pteropoda	Heteropoda	Tunicata	Fish larvae[b]	Other
2	-	300	850	2100	40	7840	700	260	700	110	300	-	960	151	630
4	350	2500	2850	2850	260	16860	2250	520	2160	260	260	90	860	383	600
5	150	1700	1460	4740	600	10940	1200	300	1200	150	650	250	400	187	450
7	210	770	2100	2520	70	10000	700	770	1330	550	280	-	1260	814	4490
8	-	600	1150	1350	120	3820	200	200	800	170	120	-	230	304	700
10	30	830	1190	2230	30	5720	730	430	1270	230	400	30	200	890	600
11	40	1490	1540	2440	90	4700	140	270	400	180	400	40	1000	120	630
14	-	180	1070	1400	90	3360	120	120	890	60	300	-	240	193	300
16	90	520	1800	2780	400	8050	1460	520	800	90	470	190	1770	261	420
19	-	-	4450	5340	130	17000	890	1650	1650	1020	1650	130	890	603	1270
20c)	120	110	680	1000	-	3550	410	280	420	70	50	90	350	241	190
20d)	250	420	1020	7220	170	7930	-	680	170	1330	170	170	1200	-	590
22	-	200	450	1400	450	3130	240	380	350	170	140	35	1220	181	70
23c)	-	-	40	120	-	5300	160	200	1600	40	160	-	-	11	40
23d)	-	-	280	280	-	14740	280	350	420	70	350	140	-	-	-
24	20	100	130	1270	-	3250	30	157	110	-	60	110	90	10	30
25c)	-	-	260	1650	-	8950	520	520	2490	-	90	170	170	17	-
25d)	-	300	75	380	-	6860	230	1050	3770	-	150	750	300	-	150
26	20	100	190	800	30	1080	60	200	150	-	480	140	50	28	1430
28c)	-	-	350	2820	-	26000	350	530	7220	-	-	530	2640	37	-
28d)	160	160	790	1440	320	13900	160	480	4160	-	640	-	960	-	940
29	270	1360	6280	400	140	1230	-	-	-	-	1230	270	41000	16	550
32	-	4000	2400	12100	-	250800	-	1600	15300	-	17700	-	800	18	1600
34c)	-	770	370	7000	930	37000	560	370	5200	-	740	-	-	175	-
34d)	-	-	2490	7100	1070	68900	700	2130	9600	-	-	-	-	-	1780
35	-	1180	590	2750	200	74200	390	2750	2520	-	200	-	2550	47	790
37c)	-	-	450	1000	-	22400	150	880	2060	-	-	-	150	10	1330
37d)	-	-	3000	9000	-	59200	-	4800	5400	600	-	-	-	-	-
38	-	-	-	5570	620	130000	620	620	10500	-	-	-	-	31	1240
39	510	510	770	1540	510	54400	770	1540	260	-	260	-	510	30	510
40c)	-	520	1560	4164	1560	91600	1040	4700	520	-	-	-	2600	14	1040
40e)	-	-	-	-	-	P	-	-	P	-	-	-	-	-	-
41f)	-	-	-	P	-	P	-	P	P	-	-	-	-	8	-
41e)	-	-	-	-	-	P	P	P	-	-	-	-	-	-	-
43	200	1200	2380	4760	400	26600	600	5350	7540	-	600	-	-	120	400
44c)	-	1870	-	1120	-	50000	190	700	1680	-	-	-	-	72	1122
44d)	-	-	-	-	-	99300	-	-	2500	-	-	-	-	-	-
46	-	1300	490	2240	40	2240	200	240	1880	-	610	-	240	14	330
47	90	90	800	90	-	50	-	50	50	-	50	90	3580	5	90
49	-	290	860	290	290	21200	570	290	290	-	102500	570	7150	78	-

a) Exact depth of tow listed in Table A-3.
b) Numbers of fish larvae are standardized to the number under 10 square meters of sea surface.
c) Deep sample.
d) Shallow sample.
e) Shallow sample, 95 per cent by volume radiolarian and diatom "fuzz."
f) Deep sample, 95 per cent by volume radiolarian and diatom "fuzz."
P: Present but not countable.

Table B-3, continued

Station	Foraminifera	Radiolaria	Coelenterata	Chaetognatha	Annelida	Copepoda	Ostracoda	Amphipoda	Euphausiacea	Decapoda	Pteropoda	Heteropoda	Tunicata	Fish larvae	Other
50	190	30	980	110	30	1430	130	350	210	30	4300	1120	80	22	290
52	-	50	100	1400	50	6000	325	620	2200	50	100	50	-	22	50
53c)	40	480	1930	170	-	940	250	60	210	-	480	300	-	12	100
53d)	60	-	1740	60	-	420	-	-	20	-	80	211	-	-	80
55	-	730	1380	800	150	12300	1460	290	1600	-	580	-	1750	118	290
56	1010	680	540	1720	370	7340	200	100	300	70	30	70	640	60	240
58c)	340	1720	1970	3340	170	11300	770	430	770	430	860	170	3080	697	1540
58d)	-	480	890	5000	400	13000	80	1450	1780	400	646	480	2900	-	2100
59c)	-	1060	210	700	140	2140	-	180	70	40	140	-	880	47	70
59d)	239	1670	480	3940	360	4000	60	-	180	180	180	180	1610	-	780
61c)	200	1700	1400	1600	200	10800	900	800	2200	200	100	100	1100	232	400
61d)	180	920	740	2280	280	5660	280	550	2490	280	90	90	1200	-	90
62c)	35	430	640	1100	160	2000	200	250	700	100	180	145	275	116	200
62d)	225	1800	1500	3550	150	3330	-	75	75	380	700	75	300	-	450
64c)	90	470	900	1120	190	7380	340	630	630	130	190	90	590	299	340
64d)	-	190	270	750	-	3200	-	40	150	80	60	40	380	-	310
65c)	30	550	510	610	270	5600	680	410	680	-	380	70	650	227	610
65d)	-	580	660	1910	250	8230	910	830	2000	420	580	500	2400	-	750
66c)	30	900	760	1090	30	6680	240	540	270	180	240	60	240	129	470
66d)	210	750	570	3430	110	4000	-	-	71	110	210	180	460	-	500
67c)	120	1670	1430	1070	360	12400	1190	1550	2020	-	950	-	-	174	120
67d)	70	4200	800	1800	800	11650	1130	1000	5210	360	1160	290	150	-	580
68c)	30	860	380	1000	140	3810	480	520	660	-	170	100	30	32	240
68d)	110	4020	1540	3030	220	4250	-	170	-	275	550	160	280	-	660
69c)	-	280	560	840	560	10800	2950	2250	3940	-	280	280	-	40	140
69d)	190	380	3790	2850	2090	6510	1900	5500	6370	760	190	380	760	-	380
70c)	-	250	235	280	30	1070	250	280	800	-	310	550	-	25	120
70d)	20	140	370	680	100	290	-	-	550	20	490	2420	40	-	470
71c)	20	30	140	160	20	540	190	360	470	250	2300	1560	-	27	280
71d)	-	80	380	80	380	5340	1140	2750	2980	760	23600	3200	-	-	2700
73c)	110	420	2400	1330	-	3240	-	300	800	70	190	150	-	29	530
73d)	40	80	250	580	20	410	-	80	160	120	250	515	40	-	360
74c)	100	1270	2730	780	100	2050	-	100	680	390	10	100	3600	12	290
74d)	260	1050	530	530	-	530	-	260	-	-	260	260	18700	-	2100
76c)	-	2780	1620	2670	120	1280	-	350	7780	120	700	-	8240	1262	1160
76d)	-	800	3240	1890	-	2690	-	-	164800	-	240	-	7550	-	1890
77c)	-	680	1920	790	-	15300	-	1580	1020	110	450	-	-	12	1250
77d)	1520	480	1960	760	-	7360	-	240	320	-	360	-	280	-	280
79c)	-	5280	2640	7400	-	53860	530	530	24800	-	1580	-	-	31	1580
79d)	-	-	-	770	-	103200	-	1540	173400	-	1540	-	-	-	-

Table B-3, continued

Station	Foraminifera	Radiolaria	Coelenterata	Chaetognatha	Annelida	Copepoda	Ostracoda	Amphipoda	Euphausiacea	Decapoda	Pteropoda	Heteropoda	Tunicata	Fish larvae	Other
80c)	-	-	-	3980	-	246400	-	-	35000	-	800	-	-	115	800
80d)	-	1500	60	16500	-	198000	-	-	83300	-	3000	-	-	-	-
81c)	-	-	-	100	-	25000	100	510	-	-	-	-	100	5	100
81d)	-	-	-	330	-	165000	-	-	-	-	-	-	330	-	3280
83c)	-	390	-	3960	-	20800	-	1180	1770	-	390	-	-	30	10
83d)	-	-	540	1080	-	38300	-	4300	8100	1600	540	-	2150	-	2160
84c)	-	410	140	690	-	28500	140	140	70	-	70	-	-	1	690
84d)	-	-	-	370	-	8530	-	30	70	-	70	-	-	-	240
86	-	340	110	1450	120	39800	-	-	780	-	220	-	110	20	340
87c)	-	3410	650	4590	220	74060	440	440	7210	-	870	-	-	19	440
87d)	-	-	-	4120	-	258900	-	-	32400	-	1770	-	590	-	-
89c)	410	6780	1850	4930	-	48300	840	410	10060	-	2870	-	-	740	820
89d)	640	960	640	4500	320	156500	320	-	35000	-	9960	-	960	-	1930
90c)	-	110	910	1940	-	8430	-	-	1030	460	230	-	14580	6	460
90d)	-	-	6010	8790	-	37900	-	2310	1850	920	3700	-	37000	-	920
93c)	340	460	3770	460	-	4570	-	230	230	110	460	-	2060	155	910
93d)	-	1400	3300	4300	760	7220	-	130	380	130	380	130	4300	-	1400
94c)	-	850	2600	420	700	840	-	200	70	-	10	70	3600	17	-
94d)	800	2000	1000	2000	800	9800	-	400	1000	800	10	-	5000	-	200
96c)	150	300	2930	2120	620	14200	150	930	2800	-	620	150	2930	341	1550
96d)	200	-	580	1360	970	3000	-	1260	2520	100	1070	290	4660	-	590
97c)	-	70	190	400	30	1130	250	130	250	40	70	100	70	46	130
97d)	80	140	1060	250	30	1770	30	80	140	170	60	220	220	-	360
99c)	70	130	330	920	-	9350	990	1110	920	400	130	200	70	42	530
99d)	-	300	800	1500	100	8560	600	800	400	630	200	400	400	-	600
100c)	-	50	80	630	30	3560	240	30	340	20	-	50	30	6	170
100d)	40	870	1620	2800	-	3000	40	70	250	110	220	180	70	-	220
102c)	-	400	610	1610	-	13100	1210	1410	1610	400	200	400	-	93	-
102d)	120	860	490	3330	250	12460	370	1600	2220	860	250	250	990	-	1480
103c)	-	1080	890	1550	190	9020	270	580	770	150	270	270	620	75	1120
103d)	80	1800	770	930	40	2200	-	40	-	120	40	580	200	-	430
105c)	120	240	1160	1100	-	7860	490	430	980	60	180	-	730	172	790
105d)	320	1180	1260	2840	160	7900	320	630	1500	630	1660	470	1740	-	2210
106c)	240	560	800	850	30	4500	500	240	380	150	320	120	210	58	820
106d)	810	440	500	1750	60	5130	60	190	1000	440	120	120	2500	-	980
108c)	70	250	760	1160	150	3370	580	180	620	180	220	40	150	434	1340
108d)	300	600	900	3080	300	8050	700	1200	1300	390	1000	200	300	-	1800
109c)	240	700	930	1090	200	2780	1130	80	690	240	480	80	240	105	1370
109d)	1540	1200	930	2800	-	9830	220	380	2200	440	710	50	1370	-	1920
111	730	470	860	860	210	8040	680	260	1500	260	1240	40	3160	238	2140
112c)	430	460	850	940	60	5190	460	210	730	270	150	30	580	134	1820
112d)	210	900	1600	3740	-	8100	-	280	140	620	350	70	550	-	1730
114c)	1350	200	1620	1350	200	4380	540	270	1080	340	270	70	200	223	1280
114d)	720	1070	2060	1790	180	7330	1700	540	1250	-	4470	180	980	-	2240

TABLE B-4. Dominant zooplankton organisms collected with Clarke-Bumpus net between 200-0 meters at Brown Bear stations.

Station	Calanus	Pseudocalanus	Metridia	Eucalanus	Chaetognatha	Gastropoda	Acartia	Euphausiacea	Oithona
110-1	x	x	x						
110-2		x							
110-3				x					
110-4				x					
110-5				x					
110-6				x	x				
110-7a				x	x				
110-8				x	x				
110-9				x					
110-10		x	x	x	x				
110-11			x						
110-12			x	x	x				
110-13	x	x							
110-14		x			x				
110-15	x	x							
110-19A		x			x				
110-19B		x	x						
110-20		x				x			
110-21	x	x							
110-22	x	x				x			
110-23		x	x			x	x		
110-24			x					x	
110-25				x		x			
110-26				x		x			
110-27	x			x					
110-28	x	x		x					
110-29		x		x				x	
110-31		x	x			x			
110-33		x				x	x		
110-35		x				x	x		
110-37		x					x		
110-39		x				x	x		
110-40		x				x	x		
110-42		x				x	x	x	
110-44		x			x				
110-45		x							
110-46	x								
110-47	x	x							
110-49		x					x		x
110-51		x	x			x		x	
110-52			x			x	x		
110-53		x							
110-54				x	x			x	
110-55		No dominant form			few		few		
110-56	x								
110-57							x		x
110-58		x							
110-59	x							x	
110-60	x								
110-61a			x						
110-62	x								
110-63	x								
110-64			No dominant form						
110-65			No dominant form		few				
110-66		x							
110-67		x							
110-69		x							

TABLE B-5a. Ten major constituents of zooplankton, by number and per cent, taken with Marutoku net (150-0 m) at Satsuma stations.

Station	Copepoda		Radiolaria		Foraminifera		Chaetognatha		Siphonophora	
	No.	%	No.	%	No.	%	No.	%	No.	%
1	2366	62.0	202	5.3	850	22.3	198	5.2	32	0.8
2	2094	52.9	501	12.7	300	7.6	123	3.1	313	7.9
3	1417	25.2	1600	28.5	1750	31.2	54	1.0	381	6.8
4	2183	68.3	150	4.7	-	-	438	13.7	104	3.3
5	1258	54.9	200	8.7	250	10.9	27	1.2	35	1.5
6	1421	45.3	1150	36.7	250	8.0	103	3.3	77	2.5
7	1546	65.6	125	5.3	75	3.2	68	2.9	30	1.3
8	1765	66.2	150	5.6	125	4.7	29	1.1	133	5.0
9	1367	70.0	3	0.2	132	6.8	103	5.2	63	3.2
10	2560	63.4	306	7.6	33	0.8	249	6.2	184	4.6
11	2792	75.9	128	3.5	-	-	196	5.3	89	2.4
12	4654	71.3	25	0.4	125	1.9	211	3.2	211	3.2
13	2194	60.9	154	4.3	103	2.9	140	3.9	219	6.1
14	2779	55.0	125	2.5	28	0.6	133	2.6	152	3.0
15	2905	74.5	100	2.6	-	-	420	10.8	120	3.1
16	1962	66.3	-	-	-	-	105	3.6	166	5.6
17	5684	74.0	525	6.8	51	0.7	333	4.3	75	1.0
18	2280	71.8	150	4.7	50	1.6	183	5.8	91	2.9
19	1134	21.2	2100	39.3	-	-	228	4.3	63	1.2
21	1532	47.6	275	8.6	126	3.9	273	8.5	231	7.2
22	1916	79.8	-	-	-	-	79	3.3	37	1.5
23	2952	72.5	200	4.9	102	2.5	168	4.1	142	3.5
24	2980	72.9	350	8.6	-	-	191	4.7	207	5.1
25	1917	62.5	400	13.0	50	1.6	139	4.5	123	4.0
26	2525	70.2	50	1.4	25	0.7	273	7.6	292	8.1
27	1775	81.5	-	-	-	-	97	4.5	7	0.3
28	1472	80.1	-	-	25	1.4	71	3.9	36	2.0
29	1508	77.8	25	1.3	-	-	148	7.6	83	4.3
30	1821	76.5	-	-	-	-	149	6.3	50	2.1
31	1847	88.3	-	-	25	1.2	-	-	53	2.5
33	2432	78.8	-	-	-	-	54	1.8	163	5.3
34	1162	64.3	-	-	25	1.4	102	5.6	61	3.4
35	1959	67.3	50	1.7	75	2.6	260	8.9	89	3.1

Table B-5a, continued

Station	Tunicata No.	Tunicata %	Ostracoda No.	Ostracoda %	Pteropoda No.	Pteropoda %	Euphausiacea No.	Euphausiacea %	Miscellaneous No.	Miscellaneous %
1	14	0.4	53	1.4	-	-	7	0.2	97	2.5
2	392	9.9	102	2.6	7	0.2	103	2.6	25	0.7
3	3	0.1	155	2.8	158	2.8	26	0.5	72	1.3
4	303	9.5	-	-	-	-	-	-	18	0.5
5	60	2.6	107	4.7	107	4.7	26	1.1	220	9.6
6	2	0.1	103	3.3	2	0.1	6	0.2	21	0.7
7	8	0.3	258	11.0	161	6.8	29	1.2	57	2.4
8	110	4.1	131	4.9	29	1.1	110	4.1	84	3.2
9	107	5.5	129	6.6	27	1.4	12	0.6	9	0.5
10	341	8.4	113	2.8	62	1.5	122	3.0	69	1.7
11	239	6.5	101	2.7	51	1.4	36	1.0	49	1.3
12	503	7.7	236	3.6	79	1.2	168	2.6	316	4.9
13	478	13.3	179	5.0	36	1.0	6	0.2	94	2.4
14	1375	27.2	309	6.1	36	0.7	52	1.0	65	1.3
15	182	4.7	29	0.7	76	2.0	3	0.1	67	1.7
16	270	9.1	176	6.0	32	1.1	51	1.7	188	6.6
17	344	4.5	252	3.3	29	0.4	20	0.3	364	4.7
18	253	8.0	102	3.2	-	-	5	0.1	63	1.8
19	353	6.6	51	1.0	307	5.8	74	1.4	1031	19.2
21	451	14.0	78	2.4	50	1.6	34	1.1	168	5.2
22	55	2.3	206	8.6	26	1.1	13	0.5	70	2.9
23	226	5.6	131	3.2	25	0.6	5	0.1	75	3.0
24	93	2.3	126	3.1	58	1.4	58	1.4	26	0.6
25	176	5.7	131	4.3	2	0.1	21	0.7	110	3.6
26	301	8.4	76	2.1	28	0.8	2	0.1	25	0.7
27	52	2.4	156	7.2	-	-	8	0.3	83	3.8
28	77	4.2	104	5.7	1	0.1	17	0.9	35	1.9
29	76	3.9	27	1.4	51	2.6	4	0.2	16	0.8
30	200	8.3	112	4.7	2	0.1	7	0.3	41	1.7
31	-	-	140	6.7	1	0.1	11	0.5	14	0.7
33	153	5.0	162	5.3	-	-	16	0.5	191	3.3
34	325	18.0	26	1.4	76	4.2	1	0.1	29	1.6
35	201	6.9	131	4.5	3	0.1	18	0.6	123	4.3

TABLE B-5b. Copepoda by species taken with Marutoku net (150-0 m) at Satsuma stations.

Station	1	2	3	4	5	6	7	8	9	10	11
Individuals/m^3, total	373.3	878.6	422.3	321.0	266.4	306.3	328.8	232.4	217.0	334.9	394.6
Phytoplankton (per cent)	62.2	76.3	39.7	48.8	52.2	44.9	55.6	42.9	50.6	36.3	48.5
Zooplankton (per cent)	37.8	23.7	60.3	51.2	47.8	55.1	44.4	57.1	49.4	63.7	51.5
COPEPODA (per cent)	100	100	100	100	100	100	100	100	100	100	100
Calanus helgolandicus									+	+	
C. tenuicornis						+		4.8	+	+	1.9
C. gracilis	+	3.2	4.0	+	+	+	+	4.4	4.2	3.3	2.2
C. robustior	+	+		+				+	+	+	
C. minor	1.4	3.5	8.8		+	2.0	4.9	5.0	5.6	8.9	10.3
C. pauper	+	+	+								
C. darwini	+	+		+	+	+	+			+	+
C. vulgaris	+	+	+	+							
Eucalanus elongatus						+				+	
E. giesbrechti		+				+	+	+	2.6	+	1.1
E. attenuatus	+			+	+	+	+			+	+
E. subcrassus	+	+		+	+		+		+	+	+
E. mucronatus	3.5	1.4	+	+	+	+	7.4	+	2.9	3.1	1.9
Rhincalanus cornutus											
Mecynocera clausi	4.3	9.6	10.6	18.3	7.9	21.1	8.1	4.3	11.0	2.9	4.7
Paracalanus aculeatus			+					+			
P. parvus							3.2	2.8	7.3	7.1	6.3
Acrocalanus gracilis									+		
A. gibber											
A. monachus							1.6	1.4		+	
A. longicornis							1.6				
Calocalanus pavo	4.2	+	7.1	18.3	+		4.9	5.7		4.9	2.7
Clausocalanus arcuicornis	15.9	2.4	3.5	4.6	4.1	7.2	6.5	4.5	+	11.0	4.8
C. pergens	6.3	7.2	7.1	6.9	4.0	7.0	6.5	5.8	+	9.8	9.0
C. furcatus				2.3			4.9	1.4			3.6
Ctenocalanus longicornis					+						
Aetideus armatus					+					+	+
A. giesbrechti	1.1	+		2.3	4.0	+		+	2.2		+
Gaetanus armiger			+								
Undeuchaeta plumosa		2.4	+		+		+			+	
Euchirella amoena											+
E. curticaudata					+						
Euchaeta marina	+	+	+	+	1.1	+	+	4.4	+	+	+
E. wolfendeni	+	+	+			+	+				
E. longicornis		2.7	+		+	+	+	+	+	+	+
E. concinna			+				+				
E. plana	+				+	+	+		+		
E. media											
E. flava			+				+			+	
E. spp				+							
E. spp juv.	3.2	7.2	3.5				1.6			1.0	
Scolecithricella orientalis						+					
S. bradi											
S. spinipedata									+		
Scolecithrix danae	+	+		+	+	+	+	+		+	+
Phaenna spinifera					+		+				
Centropages calaninus			3.6			+	+	1.8			
C. longicornis	+	2.5		2.3				+	+		
C. gracilis					+						
C. violaceus					+	+		+			+

Table B-5b, continued

Station	1	2	3	4	5	6	7	8	9	10	11
Centropages spp	3.2										
Phyllopus bidentata											
Temora turbinata											+
T. discaudata		+		+	+		+				
T. stylifera											
Pleuromamma abdominalis			1.6		1.7		1.1			+	
P. xiphias					+						
P. robusta											
P. gracilis			+		4.5	+	1.0	+		+	
Lucicutia ovalis	1.1					3.5			3.7	1.0	1.8
L. flavicornis	3.2	7.2	7.1	2.3		+			5.5	6.8	9.0
Heterorhabdus papilliger						3.8	+	+	+	+	1.0
Haloptilus longicornis			3.6		+	+	+	+	+	+	+
H. ornatus		+					+			+	+
H. spiniceps				+							
H. acutifrons						+		+	+		
H. oxycephalus		+				+	+		+		+
Candacia longimana									+	+	
C. catula		+	+				+	+			
C. truncata		+			+		+		+	+	+
C. pectinata											+
C. curta	+				+	+				+	+
C. bispinosa		+			+	+	+	+		+	+
C. aethiopica				+			+	+		+	
C. bipinnata						+	+				
C. spp		2.4		2.3						1.0	+
Labidocera pavo			3.8								+
L. detruncata							+				
L. enchaeta								1.4			
L. japonica									+		
Pontellopsis armata										+	
Pontellina plumata	+				+			+			
Acartia spp	15.8	4.8	7.1	11.5	19.9	10.6	9.7	24.1	11.0	15.6	3.7
Oithona spp	8.5	7.2	10.6	4.6	4.0	3.5	1.6	7.1	9.1	4.0	9.3
Setella spp											
Oncaea spp	7.4	9.6	3.5	4.6	31.8	10.6	14.6	4.2	3.7	4.9	11.7
Sapphirina metallina		+		+			+	+			+
S. gemma									+		
S. darwinii											
S. stellata											
S. auronitens											
S. intestinata										1.0	
S. gastrica											
S. spp											
Corycaeus spp		9.6	10.6	4.6	7.9	24.6	14.6	11.3	21.9	9.1	9.1
Copilia recta											
C. mirabilis		+	+	+	+	+	+	+	3.4	+	+
C. quadrata		+	+	+		+	+	+	2.1	+	+
C. longistylis	1.1			+	4.1	+					
Pachysoma dentatum											
Nauplius	6.3	9.6		6.9				1.4			
Copepotid	11.6	4.8		6.9				1.4		+	

Table B-5b, continued

Station	12	13	14	15	16	17	18	19	21	22	23
Individuals/m^3, total	477.0	399.7	321.4	311.0	248.9	464.8	1647.7	216265.1	201.8	159.1	262.7
Phytoplankton (per cent)	31.1	50.5	20.5	33.3	49.3	20.1	90.0	99.9	35.2	28.9	26.6
Zooplankton (per cent)	68.9	49.5	79.5	66.7	50.7	79.9	10.0	0.1	64.8	71.1	73.4
COPEPODA (per cent)	100	100	100	100	100	100	100	100	100	100	100
Calanus helgolandicus	+	+									
C. tenuicornis	+	1.1	+			1.4	8.0		8.9		3.5
C. gracilis	+	+	3.0	+	1.6	+	2.2	+	2.7	+	+
C. robustior				+	+	+			+	+	+
C. minor	6.6	10.7	9.7	6.2	19.3	10.8	4.7	4.9	11.9	3.3	17.1
C. pauper											
C. darwini	+	+		+		+			+	+	+
C. vulgaris											
Eucalanus elongatus	+	+	+		+	+	+	+	+		+
E. giesbrechti	+	+	1.4	+	+	+			+	1.3	+
E. attenuatus	+					+					
E. subcrassus	1.3	+	+	+		+					
E. mucronatus	2.7	+	8.1	2.0	+	6.3	+	+	+		
Rhincalanus cornutus		+	+		+						
Mecynocera clausi	1.7	9.3	+	5.3	10.2	3.7	5.5	22.0	9.8	5.3	3.4
Paracalanus aculeatus			+					+		+	
P. parvus	1.1	2.3	4.5		3.8	1.3	3.3		4.9		4.2
Acrocalanus gracilis	+										+
A. gibber								+			
A. monachus								+			
A. longicornis											
Calocalanus pavo	2.7	1.1	1.8	+	2.5	4.0			1.6	2.6	5.1
Clausocalanus arcuicornis	8.1	3.7	7.3	4.3	8.7	5.7	5.5			6.5	3.4
C. pergens	11.9	8.0	11.7	6.1	7.6	4.4	6.6	17.6	4.9	13.0	2.5
C. furcatus	1.1	1.1	3.6	+	7.7	+				6.5	3.4
Ctenocalanus longicornis											
Aetideus armatus	+										
A. giesbrechti	1.1		+	+		+					
Gaetanus armiger											
Undeuchaeta plumosa	+		+			+		+		+	
Euchirella amoena								+	+	+	
E. curticaudata								+		+	
Euchaeta marina	2.3	+	+	+	+	+	+	+	+	+	+
E. wolfendeni								+			
E. longicornis	+	+	+	+	+	+			+		
E. concinna											
E. plana											
E. media											
E. flava		+									
E. spp		+	+	+		+			+	+	
E. spp juv.	+	1.1		1.7	1.3	4.4	2.2		3.3	3.9	+
Scolecithricella orientalis		+									
S. bradi											
S. spinipedata											
Scolecithrix danae	+	+	+		+	+	+		+	+	+
Phaenna spinifera		+									
Centropages calaninus											2.7
C. longicornis											6.8
C. gracilis				+							
C. violaceus			+								

Table B-5b, continued

Station	12	13	14	15	16	17	18	19	21	22	23
Centropages spp				+	1.3				1.6		5.1
Phyllopus bidentata	+										
Temora turbinata											
T. discaudata		1.5									
T. stylifera		2.3									
Pleuromamma abdominalis	+		1.0			+	2.5	2.6	+	+	1.0
P. xiphias			+				+	+		+	
P. robusta	+		+								
P. gracilis	3.4	+	1.3			+	4.9	+	1.6	2.7	4.6
Lucicutia ovalis	+	2.3	+			+					
L. flavicornis	3.2	1.2	7.2	7.7	1.3	4.0	17.6		3.3	10.5	7.6
Heterorhabdus papilliger	1.1	+	+	2.7	1.3	1.4	+	+	5.2	1.4	1.2
Haloptilus longicornis	+		1.1	+	+	+	1.2			1.3	1.0
H. ornatus	+		1.0		+	+			+		+
H. spiniceps											
H. acutifrons					+	+					
H. oxycephalus			+	1.7						+	
Candacia longimana											
C. catula			+	+							
C. truncata	+	+		+	+	+				+	+
C. pectinata			+								
C. curta		+								+	
C. bispinosa			+			+			+		+
C. aethiopica	+	+		+	+	+			+		+
C. bipinnata	+			+		+					
C. spp						1.8			1.6	1.3	
Labidocera pavo			+						+	+	+
L. detruncata						+				+	
L. enchaeta											
L. japonica											
Pontellopsis armata											
Pontellina plumata		+				+		+			+
Acartia spp	5.4	9.3	8.1	7.8	7.6	15.0	8.8	17.6	16.3	15.7	5.1
Oithona spp	6.7	8.0	6.4	12.2	2.5	11.0	13.2	13.2	16.5	9.1	8.5
Setella spp				+		1.3					
Oncaea spp	20.0	12.6	6.3	19.8	7.6	10.6	3.3		8.2	2.6	4.2
Sapphirina metallina	+		+								
S. gemma							+				
S. darwinii			+								
S. stellata		+	+		+						
S. auronitens			+								
S. intestinata	+									+	+
S. gastrica				+							
S. spp			+	+							
Corycaeus spp	5.1	9.6	9.3	12.9	7.6	8.8	7.7	8.8	3.3	6.5	6.0
Copilia recta							+				
C. mirabilis	+	4.7	+	+	3.1	+			+		+
C. quadrata	+	+	+	+	+	+	+			+	+
C. longistylis											
Pachysoma dentatum											
Nauplius	5.4	4.6		+	1.3		2.2	8.8			+
Copepotid	3.2			+	1.3	+			3.3	2.6	5.1

Table B-5b, continued

Station	24	25	26	27	28	29	30	31	33	34	35
Individuals/m^3, total	212.7	163.4	5672.8	687624.8	27142.8	209.5	187.1	157.4	210.9	156.2	224.3
Phytoplankton (per cent)	15.5	10.2	96.5	99.9	99.7	44.4	28.0	27.0	27.6	42.8	35.8
Zooplankton (per cent)	84.5	89.8	3.5	0.1	0.3	55.6	72.0	73.0	72.4	57.2	64.2
COPEPODA (per cent)	100	100	100	100	100	100	100	100	100	100	100
Calanus helgolandicus		+		+	+	+	+	+			
C. tenuicornis	4.9	4.0	3.8	14.7	+	2.3	+	2.9	2.3	7.7	10.0
C. gracilis	1.2	+	1.7	2.1	3.3	5.6	4.1	4.4	+	+	2.4
C. robustior	+				+	+	+				+
C. minor	9.3	20.7	5.7	4.8	3.9	1.2	1.8	+	2.3	4.6	3.9
C. pauper											
C. darwini	+	+	+	+	+	+	+	+	+	+	+
C. vulgaris						+					
Eucalanus elongatus				2.8							
E. giesbrechti	+			+	+		+	+	+		+
E. attenuatus			+								
E. subcrassus				+							
E. mucronatus			+	+	2.1			+	+		+
Rhincalanus cornutus											
Mecynocera clausi	+	7.8	4.0	2.8	5.1	3.3	1.4	4.2	4.1	10.8	2.6
Paracalanus aculeatus		1.3									
P. parvus	4.2	1.3	3.0		10.2	3.4	1.4		4.2	4.3	1.3
Acrocalanus gracilis		1.3									
A. gibber											
A. monachus											
A. longicornis											
Calocalanus pavo	1.7	1.3			3.9		2.7		3.1	2.2	
Clausocalanus arcuicornis	10.1	10.4	7.9	2.9		5.3	9.7	4.1	5.2	4.6	7.7
C. pergens	14.3	13.0	5.0	8.5	6.8	3.4	7.0	12.2	12.4	4.3	11.5
C. furcatus					1.7						
Ctenocalanus longicornis											
Aetideus armatus	+										
A. giesbrechti			+	+	1.7		1.4	2.7	+	2.2	3.9
Gaetanus armiger								+	+		
Undeuchaeta plumosa					+	+	1.4	+	+		+
Euchirella amoena	+				+		+				+
E. curticaudata											
Euchaeta marina	2.4	+	+	+	1.2	+	+	+	2.1	1.0	1.1
E. wolfendeni							+				
E. longicornis	+			+	+	+	+	+	+	+	+
E. concinna											
E. plana			+			+	+	+	+	+	
E. media											
E. flava											
E. spp	+	+	+	+	1.8	+			+	+	+
E. spp juv.	+	1.3	5.0	5.7	3.5	1.7	4.3	4.2	4.4		
Scolecithricella orientalis		+						1.4			
S. bradi											
S. spinipedata											
Scolecithrix danae	+		1.0	+	+	+	+	+	+		+
Phaenna spinifera											
Centropages calaninus						+			+		
C. longicornis	+	+	1.1			+				+	+
C. gracilis									+		
C. violaceus								+			

Table B-5b, continued

Station	24	25	26	27	28	29	30	31	33	34	35
Centropages spp											
Phyllopus bidentata											
Temora turbinata											
T. discaudata											
T. stylifera											
Pleuromamma abdominalis	1.0	+			4.3	+		2.7	+	+	+
P. xiphias											+
P. robusta		1.3									
P. gracilis	+	6.8	2.1	+	+		7.4	3.5	1.6	2.2	3.3
Lucicutia ovalis		1.3		2.8		1.7		2.7	1.0		
L. flavicornis	5.9	2.6	4.0	2.8	6.8	6.6	4.2	13.6	14.0	2.2	+
Heterorhabdus papilliger	+	+	3.2	+	1.7	2.1	+	+	1.2		+
Haloptilus longicornis			1.3	3.1	1.8	5.7	1.9	+	+	+	+
H. ornatus			+	+	+	+	+	+	+	+	
H. spiniceps											
H. acutifrons		+	+	+	+				+	+	
H. oxycephalus	+		+					+	+		+
Candacia longimana					+						+
C. catula						+					
C. truncata	+	+	+	+	+	+	+	+	+	+	+
C. pectinata											
C. curta	+										
C. bispinosa	+	+		+	+	1.0	+	+	+	+	+
C. aethiopica	+	+		+		+	+				+
C. bipinnata		+						+			
C. spp			1.0		3.4			2.7	1.0		1.4
Labidocera pavo		+	+	+	1.8				+	+	
L. detruncata		+	+	+	+				+		
L. enchaeta				+	+				+		
L. japonica											
Pontellopsis armata											
Pontellina plumata					+				+		
Arcartia spp	13.4	7.8	13.9	14.1		5.0	4.1	8.3	2.1	15.1	8.9
Oithona spp	5.0	7.8	23.8	16.9	11.9	9.9	12.4	5.6	14.5	19.4	11.5
Setella spp			1.0								
Oncaea spp	5.0	5.3	5.0		6.8	21.6	11.0	9.5	9.3	8.6	12.8
Sapphirina metallina				+	+		+		+	+	+
S. gemma			+					+	+		
S. darwinii											
S. stellata											
S. auronitens											
S. intestinata						+		+	+	+	
S. gastrica											
S. spp			1.0								
Corycaeus spp	13.5	2.7	3.3	8.7	6.8	7.1	12.6	6.8	7.2	2.2	12.9
Copilia recta			+								
C. mirabilis						+	+	+	1.0	+	+
C. quadrata	+		+			3.4	+	+	+	+	+
C. longistylis				+	+						+
Pachysoma dentatum					+		2.7		+		
Nauplius					1.7	3.3					
Copepotid	+		1.0	2.8	5.1	1.7	5.5	4.1	1.0	4.3	2.6

+: less than one per cent

TABLE B-5c. Chaetognatha, Tunicata, Euphausiacea, and miscellaneous zooplankton constituents by species taken with Marutoku net (150–0 m) at Satsuma stations.

Station	1	2	3	4	5	6	7	8	9	10	11
CHAETOGNATHA (by numbers)											
Sagitta hexaptera		7	2	1						2	1
S. lyra			1			1				4	
S. enflata	2	3	1	6	2	5	8	3	4	4	13
S. bipunctata	3	15	3	5	4	3	1	3	2	3	2
S. robusta	2	4		2	2		5				1
S. ai	1	1					1		1	2	3
S. serratodentata		9	5	4	4	3	5	1	1		8
S. regularis		14									
Pterosagitta draco	5	8	11	10	2	6	4	4	3	5	5
Krohnitta subtilis										1	
Sagitta spp	185	62	31	410	13	85	44	18	90	228	63
TUNICATA (by numbers)											
Oikopleura spp		365		301	50		2	100	4	201	204
Doliolum spp	8	9	3	1	8	2	5	10	35	51	3
Salpa mucronata	6	18			2		1		68	89	32
S. fusiformis											
Pegea confoederata										7	
EUPHAUSIACEA (by numbers)											
Thysanopoda tricuspidata										6	
T. monacantha											
T. aequalis											
T. sp											
Euphausia recurva			2							1	
E. brevis											
E. tenera											
E. similis										2	
E. gibba										1	
E. hemigibba			5		14		3			4	
E. spp juv.			3		9					3	
E. spp							9			2	
Nematocelis microps											
N. spp juv.			1		1					4	
N. spp							2			5	
Stylocheiron sp										2	
Other	7	103	15		2	6	15	110	12	92	36

MISCELLANEOUS (by stations)	
Alima larvae	1, 5
Amphipoda	all stations
Cephalopoda larvae	12
Decapoda larvae	3-8, 10-23, 25-35
Evadne spp	5, 10, 12, 13, 16, 17, 18, 19, 23, 25, 30, 31, 35
Fish eggs	1, 4, 5, 6, 8, 9, 12, 14, 16, 17, 19, 22, 24, 26, 27, 29-34
Fish larvae	1, 3, 5, 7, 10, 12, 14, 16-19, 22, 24-28, 30, 33, 35
Lucifer raynaudi	1-4, 6-8, 10-24, 26-33, 35
Polychaeta	1-13, 15-28, 29, 30, 35
Polychaeta larvae	1, 3
Zoea larvae	1, 5, 12, 15-22, 26, 27, 30, 33, 35

Table B-5c, continued

Station	12	13	14	15	16	17	18	19	21	22	23
CHAETOGNATHA (by numbers)											
Sagitta hexaptera		2	2				2	5	3		
S. lyra			1		1	5	2			1	1
S. enflata	18	4	6	10	8	2	5		3	2	2
S. bipunctata		1	5	1	2	3		4	7	1	
S. robusta						2					
S. ai		5	3	1		3			1		
S. serratodentata	3	2	4	4	5	2					
S. regularis											
Pterosagitta draco	9	9	7	4	6	15	1	7	5	3	2
Krohnitta subtilis			2	1			4	2	3		1
Sagitta spp	181	117	103	399	88	301	169	210	251	72	162
TUNICATA (by numbers)											
Oikopleura spp	407	359	379	155	51	226	250	300	425	50	175
Doliolum spp	95	105	67	26	27	26	2	52	26	4	51
Salpa mucronata	1	14	979	1	184	92	1	1			
S. fusiformis										1	
Pegea confoederata											
EUPHAUSIACEA (by numbers)											
Thysanopoda tricuspidata											
T. monacantha											
T. aequalis			2							1	
T. sp											
Euphausia recurva	2		1								
E. brevis	1										
E. tenera	1		1								
E. similis	1							2			
E. gibba	1							9			
E. hemigibba	1		2					4		2	
E. spp juv.	3		4							2	
E. spp	3		1					5		1	
Nematocelis microps										1	
N. spp juv.	4		8								
N. spp	2							1			
Stylocheiron sp											
Other	148	6	33	3	51	20	4	53	34	6	5

Table B-5c, continued

Station	24	25	26	27	28	29	30	31	33	34	35
CHAETOGNATHA (by numbers)											
Sagitta hexaptera			1	2	1		2		1		
S. lyra											
S. enflata		2	3		3	2	1		2	1	2
S. bipunctata	3		4	4		2			2	1	1
S. robusta				10	1	1					1
S. ai			3		1				1	1	
S. serratodentata					1	2			2		
S. regularis											
Pterosagitta draco	2	1	4	6	3	1	1		3	6	8
Krohnitta subtilis				1		1	1		2	1	2
Sagitta spp	186	136	258	74	61	139	44		41	92	246
TUNICATA (by numbers)											
Oikopleura spp	75	175	301	50	75	75	200		127	300	200
Doliolum spp	17	1		1	2					25	1
Salpa mucronata	1					1			26		
S. fusiformis											
Pegea confoederata				1							
EUPHAUSIACEA (by numbers)											
Thysanopoda tricuspidata											
T. monacantha		1									
T. aequalis											1
T. sp		1									
Euphausia recurva											
E. brevis		1									
E. tenera											
E. similis											
E. gibba											
E. hemigibba		6			6			1			2
E. spp juv.									3		
E. spp		3						5	2		
Nematocelis microps											
N. spp juv.											
N. spp											
Stylocheiron sp		1									
Other	58	8	2	107	11	4	7	5	11	1	15

Station	Removed Before Weighing: Salpa mucronata	Pegea confoederata	Siphonophora	Removed After Weighing: Fish Larva Wet Weights (gr)
4		24		
9		2		
10		1		
11	2			
12			2	1 0.0660
13	3	1		
14	47			
15		3	1	
16		15		
18				1 0.0200
26			2	
28			1	

TABLE B-6a. Major zooplankton constituents of large and small organisms by per cent taken with "O" net (100-0 m) at Yushio Maru stations. a)

Station	1001	1009	1010	1011	1013	1014	1016	1018	1019	1021	1022	1024	1027	1028	1030
No. of zooplankton/m^3	412	612	2848	319	193	96	271	329	264	726	391	396	144	55	1063
No. of zooplankton (large size)	51	110	59	79	14	64	7	43	24	24	35	154	3	4	401
No. of zooplankton (small size)	361	501	2789	232	179	160	278	286	288	702	426	550	147	59	1464
ZOOPLANKTON (large size) %	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Calanus helgolandicus	82	11	12	67	44	7.5	-	-	74	44	61	-	-	46	19
C. plumchrus	-	62	68	1.5	2.9	0.6	-	-	-	-	2.3	27	-	-	0.0
C. tenuicornis	-	-	8.1	-	5.8	-	-	-	-	-	-	-	-	-	-
C. gracilis	-	-	-	-	-	-	-	1.4	-	5.1	-	-	-	-	-
C. pauper	-	-	-	-	-	-	-	6.2	-	-	-	-	-	-	-
Eucalanus bungi bungi	-	1.1	8.1	1.5	5.8	1.9	18	-	8.2	3.4	9.1	-	54	2.9	0.0
E. mucronatus	-	-	-	-	-	-	-	68	1.6	-	-	-	-	-	-
Rhincalanus cornutus	-	-	-	-	-	-	8.4	-	-	-	-	-	-	-	-
Euchaeta marina	-	-	-	-	-	-	-	5.3	-	-	-	-	-	-	-
Scolecithrix danae	-	-	-	-	-	-	-	5.8	-	1.7	-	-	-	-	-
Metridia lucens	9.4	17	-	24	-	75	-	-	8.2	-	6.8	72	-	46	80
Candacia bipinnata	2.3	-	-	0.5	12	-	-	-	4.9	3.4	6.8	-	7.1	-	-
Amphipoda	-	-	-	-	2.9	-	-	0.7	-	41	-	-	-	-	0.0
Parathemisto oblivia	-	0.5	2.2	1.9	12	7.5	-	-	-	-	-	-	7.1	-	-
Euphausiacea	-	0.2	1.4	-	-	-	7.0	-	-	-	-	0.3	18	-	0.0
Lucifer raynaudi	-	-	-	-	2.9	1.3	9.9	1.2	1.6	-	-	-	-	-	-
Sagitta enflata	-	-	-	1.5	8.8	0.5	18	5.1	-	-	1.1	0.3	14	5.7	-
S. bedoti	9.8	-	-	-	-	-	-	-	-	-	11	-	-	-	-
S. elegans	-	7.3	-	0.4	-	-	-	-	-	-	-	-	-	-	-
Salpa fusiformis	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
Thalia democratica v. orientalis	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
Tomopteris pacifica	-	-	-	0.4	3.7	1.3	8.4	-	1.6	1.7	1.4	-	-	-	-
ZOOPLANKTON (small size) %	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Muggiaea spp.	-	-	-	17	17	5.0	12	1.7	6.7	-	1.2	1.2	1.1	8.8	-
Paracalanus parvus	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clausocalanus arcuicornis	-	-	-	-	-	-	5.3	34	7.4	-	-	4.2	1.1	-	-
Pseudocalanus minutus	-	96	99	15	9.0	10	-	-	-	36	33	53	17	8.8	80
Oithona plumifera	1.0	-	-	8.3	4.5	3.4	5.3	-	-	0.7	1.8	-	1.1	-	-
O. similis	-	-	-	-	1.8	-	1.8	-	1.2	0.7	4.9	1.2	7.8	15	-
Oncaea media	6.2	-	-	-	1.8	1.7	5.3	27	0.6	2.1	1.2	-	3.3	5.9	-
Copepoda juv.	16	-	0.2	21	5.4	15	-	1.7	3.6	4.1	17	4.2	3.3	18	2.4
Evadne tergestina	-	-	-	-	-	-	5.3	1.7	29	0.7	-	6.7	18	18	5.4
Podon schmackeri	-	-	-	-	-	-	5.3	-	-	-	-	-	-	-	-
Penilia schmackeri	17	-	-	-	-	-	25	-	8.5	6.8	4.9	-	2.2	8.8	0.6
Ostracoda	1.0	-	-	-	-	-	-	17	0.6	-	0.6	-	-	-	-
Sagitta juv.	11	-	0.2	12	21	16	-	13	7.9	24	15	4.8	7.1	15	1.8
Oikopleura spp.	2.1	-	-	6.2	7.2	6.7	7.1	-	10	12	10	12	4.4	-	1.8
Doliolum nationalis	-	-	-	11	2.2	-	-	-	-	-	-	-	-	-	-
D. tritonis	3.1	-	-	-	0.9	8.0	0.0	-	18	5.5	2.5	-	4.4	-	-
Balanus nauplius larva	6.2	-	-	4.2	-	-	-	-	-	0.7	-	-	-	-	-
Mysis larva	5.1	0.2	-	0.7	2.7	16	8.8	1.7	1.8	3.4	3.7	10	14	-	4.8
Other crustacean larva	-	-	-	-	-	6.7	-	-	-	-	-	-	-	-	1.2
Fish larva	0.3	-	-	0.2	0.1	5.0	12	0.0	0.6	-	-	-	-	-	-

a) Identified by Y. Kawarada.

TABLE B-6b. Minor zooplankton constituents (less than 5% at any station) taken with "O" net (100-0 m) at Yushio Maru stations.

LARGE SIZE	
Calanus cristatus	1009-1011, 1014, 1024, 1030
C. robustior	1018
C. minor	1016
C. vulgaris	1018
Aetidius sp	1014
Euchaeta longicornis	1018
E. wolfendeni	1018
E. flava	1014
Centropages bradyi	1001
Pleuromamma abdominalis	1001
P. xiphias	1001
P. robusta	1014
Candacia truncata	1018
C. curta	1018
C. pacifica	1024
Labidocera pavo	1018
Copilia mirabilis	1018
SMALL SIZE	
Noctiluca scintillans	1001
Liriope tetraphylla	1014, 1016
Hydromedusa	1011, 1013, 1014, 1019, 1022, 1024, 1027
Calanus juv.	1011, 1013, 1014, 1021, 1024
Eucalanus juv.	1009, 1011, 1013, 1016, 1022, 1024, 1027, 1030
Euchaeta juv.	1001, 1018, 1019
Temora stylifera	1001, 1016, 1018, 1021, 1024, 1027, 1028
Candacia juv.	1016, 1027
Acartia danae	1018, 1027
Microsetella rosea	1013
Sapphirina augusta	1016
S. intestinata	1018
S. auronitens	1013, 1016
S. juv.	1011, 1027
Corycaeus sp	1001, 1013, 1016, 1021
Doliolum denticulatum	1019
Gastropoda veliger	1019, 1027, 1028, 1030
Dentalium sp	1001, 1018
Squid larva	1014
Polychaeta larva	1011, 1013, 1022, 1027
Zoea larva	1011, 1013, 1027
Copepoda nauplius	1016, 1027

TABLE B-7a. Major zooplankton constituents by per cent taken with "O" net (100-0 m) at Ryofu Maru stations. [a)]

Station	448	451	452	454	456	457	458	459	460	461	464
No. of zooplankton/m^3	26(1)	24(1)	18(2)	76(1)	28(1)	64(1)	89(1)	25(1)	59(1)	11(2)	78(1)
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100	100
Foraminifera	11	1.7	-	3.2	0.7	1.9	-	0.8	6.1	2.3	0.5
Radiolaria	9.4	4.2	-	2.6	4.3	1.9	39	2.4	3.4	2.3	10
Noctiluca scintillans	-	-	0.4	-	-	-	-	-	-	17	-
Pyrocystis pseudonoctiluca	11	28	22	30	32	51	0.9	31	20	-	44
Medusae	0.8	-	9.0	4.2	0.7	1.2	6.7	-	2.7	-	2.0
Chaetognatha	1.6	4.2	4.8	3.3	6.9	3.1	2.5	1.8	1.3	1.8	1.6
Sagitta minima	0.2	0.6	1.8	0.1	0.4	1.0	0.4	-	0.3	0.1	0.6
S. juv.	0.8	1.7	1.3	1.6	2.8	1.2	1.8	0.8	0.7	0.9	0.5
Copepoda	58	47	13	41	39	33	34	56	48	31	33
Calanus helgolandicus	-	0.4	3.2	-	-	-	3.2	-	-	3.6	-
Eucalanus subtenuis	0.4	1.2	-	0.2	0.9	1.2	-	0.2	1.0	-	0.4
Mecynocera clausi	-	0.8	-	2.6	3.6	1.2	-	0.8	0.7	-	2.0
Paracalanus aculeatus	-	0.8	-	3.7	0.7	2.8	-	3.2	-	-	0.5
Clausocalanus arcuicornis	8.6	2.5	-	2.1	2.1	2.2	0.4	-	2.7	-	4.6
C. furcatus	-	0.8	-	-	-	-	-	-	-	-	-
C. pergens	1.6	1.7	-	1.1	1.4	1.2	1.3	6.4	4.1	-	1.5
Pseudocalanus minutus	-	-	-	-	-	-	9.4	-	-	8.3	-
Ctenocalanus longicornis	1.6	4.2	1.3	0.5	-	1.2	-	1.6	2.0	-	0.5
Metridia lucens	-	-	-	-	-	-	4.5	-	-	-	-
Oithona plumifera	6.2	2.5	0.4	2.6	7.1	4.4	4.9	6.4	6.8	4.6	5.6
O. similis	3.1	-	0.4	-	-	-	-	-	-	0.8	-
Oncaea media	-	0.8	-	0.5	-	1.2	-	-	1.4	-	2.0
O. venusta	6.2	9.3	0.4	10	1.4	5.6	-	7.2	12	0.8	5.6
Corycaeus spp	2.3	1.7	1.3	1.6	5.0	2.2	0.9	3.2	3.4	0.8	1.5
Copepodite stage larva	16	8.5	4.0	4.8	5.0	3.1	7.2	22	7.4	9.1	4.1
Nauplius stage larva	4.7	-	-	-	-	-	-	-	-	-	-
Evadne tergestina	-	-	3.1	-	-	-	7.6	0.8	-	2.3	-
Podon schmackeri	-	-	-	-	-	-	-	-	-	-	-
Penilia schmackeri	-	0.8	33	-	-	-	0.4	-	-	0.8	-
Crustacea misc.	0.5	2.0	0.4	0.5	3.0	0.2	1.8	-	3.4	9.9	1.5
Doliolum denticulatum	-	-	-	0.5	-	0.3	-	-	-	-	-
D. tritonis	0.8	-	2.2	-	-	-	3.0	-	-	28	-
Copelata	2.3	5.9	2.2	12	7.8	4.1	3.0	2.4	9.5	0.8	3.1
Pelagic eggs	0.8	-	1.3	-	-	-	-	-	0.7	1.5	-

a) Identified by M. Kitou.

Table B-7a, continued

Station	466	468	471	472	474	475	477	480	481	484	487
No. of zooplankton/m^3	44(1)	97(1)	67(1)	56(1)	43(1)	48(1)	59(1)	84(1)	89(1)	98(1)	57(1)
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100	100
Foraminifera	1.4	1.7	0.6	0.7	-	-	2.1	2.4	0.4	1.2	0.7
Radiolaria	6.8	1.2	56	5.7	9.3	2.1	18	-	4.0	2.8	3.5
Noctiluca scintillans	0.9	5.0	-	-	-	-	1.4	3.8	-	9.0	-
Pyrocystis pseudonoctiluca	47	9.9	5.4	39	47	46	11	16	59	18	49
Medusae	3.2	1.2	3.6	2.9	0.9	0.8	1.4	3.3	0.9	2.5	2.8
Chaetognatha	2.8	3.4	4.3	1.8	1.8	1.9	6.2	5.8	2.1	5.6	2.3
Sagitta minima	0.2	0.8	1.2	0.2	0.4	0.5	1.0	0.7	0.2	2.1	0.6
S. juv.	1.8	2.1	3.0	0.7	0.9	0.8	5.1	4.3	1.3	2.9	0.7
Copepoda	29	14	25	37	32	37	31	41	26	29	35
Calanus helgolandicus	-	0.8	-	-	-	-	0.0	0.1	-	0.2	-
Eucalanus subtenuis	0.1	0.0	-	0.3	0.4	1.3	-	0.1	0.3	0.3	3.3
Mecynocera clausi	1.4	-	-	1.4	1.4	2.5	0.7	1.0	1.8	-	3.5
Paracalanus aculeatus	0.5	-	-	-	-	-	-	0.5	1.8	-	-
Clausocalanus arcuicornis	0.9	0.8	4.8	2.2	3.7	2.5	2.7	4.8	-	1.2	1.4
C. furcatus	-	-	-	4.3	-	-	-	-	-	-	-
C. pergens	2.3	0.8	-	1.4	0.9	0.8	1.4	0.5	-	0.8	0.7
Pseudocalanus minutus	-	-	-	-	-	-	-	-	-	-	-
Ctenocalanus longicornis	1.4	0.8	9.0	-	-	0.4	4.4	6.2	1.3	0.4	2.8
Metridia lucens	-	-	-	-	-	-	0.2	-	-	0.2	-
Oithona plumifera	8.6	1.7	2.4	9.3	4.7	4.6	2.7	3.8	4.9	1.2	2.1
O. similis	-	-	-	-	-	-	2.4	1.9	-	0.4	-
Oncaea media	0.5	0.4	-	-	1.4	1.3	-	1.9	1.8	1.2	2.8
O. venusta	1.8	1.2	0.1	2.9	1.9	2.9	3.8	3.8	2.2	5.7	6.3
Corycaeus spp	1.8	1.2	1.2	2.2	1.9	4.2	0.3	1.0	2.7	4.9	2.1
Copepodite stage larva	5.9	3.7	5.4	7.2	9.8	11	8.5	8.1	5.4	6.5	3.5
Nauplius stage larva	-	-	-	-	-	-	-	-	-	-	-
Evadne tergestina	-	1.2	6.0	-	0.9	-	1.0	1.4	0.4	4.5	-
Podon schmackeri	-	-	0.6	-	-	-	5.8	3.3	-	0.8	-
Penilia schmackeri	0.9	52	3.6	0.7	0.5	-	14	14	-	16	-
Crustacea (misc.)	1.4	3.7	3.1	1.8	1.3	2.1	4.1	2.4	0.1	1.3	0.6
Doliolum denticulatum	0.5	-	-	0.7	-	0.1	-	-	0.2	-	0.1
D. tritonis	-	-	-	-	-	-	-	-	-	-	-
Copelata	4.5	5.8	3.0	5.7	1.4	6.3	2.7	5.3	2.2	8.6	3.5
Pelagic eggs	-	-	3.0	-	2.3	0.4	-	1.0	-	-	-

Table B-7a, continued

Station	489	491	493	495	497	499	501	502	503	504	506
No. of zooplankton/m^3	56(1)	15(2)	13(2)	11(2)	72(1)	15(2)	95(1)	58(1)	87(1)	10(2)	21(2)
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100	100
Foraminifera	0.5	1.1	-	-	1.1	1.1	-	2.8	1.8	0.8	0.8
Radiolaria	3.2	8.6	3.6	1.5	4.4	11	2.5	14	11	44	6.8
Noctiluca scintillans	-	1.6	-	-	1.1	0.5	-	-	0.9	12	2.3
Pyrocystis pseudonotiluca	27	37	48	28	19	11	24	23	37	4.7	14
Medusae	1.1	3.2	1.2	0.7	-	0.5	5.0	1.4	1.8	5.5	6.8
Chaetognatha	1.9	2.4	1.2	1.7	3.4	5.2	6.9	1.0	3.5	0.5	1.1
Sagitta minima	0.3	1.1	0.2	0.4	1.4	0.7	3.0	0.3	0.4	-	0.7
S. juv.	1.1	1.1	0.6	0.7	1.1	3.8	3.4	0.2	2.7	-	-
Copepoda	44	30	41	59	28	36	34	56	33	26	21
Calanus helgolandicus	-	-	-	-	-	0.5	1.9	0.1	0.1	1.3	1.7
Eucalanus subtenuis	0.6	-	1.2	2.7	0.1	0.1	0.5	1.0	0.0	0.0	-
Mecynocera clausi	0.5	0.5	1.8	0.7	1.1	-	-	2.8	-	-	-
Paracalanus aculeatus	-	-	1.2	3.6	-	0.5	0.8	1.4	-	-	-
Clausocalanus arcuicornis	1.6	2.1	3.0	6.5	-	4.9	0.8	2.8	-	2.3	-
C. furcatus	0.5	1.6	1.8	1.5	-	-	-	-	3.7	-	-
C. pergens	3.2	1.1	3.0	4.4	1.1	1.1	3.4	2.8	4.6	0.8	0.8
Pseudocalanus minutus	-	-	-	-	-	-	-	-	-	-	-
Ctenocalanus longicornis	3.2	1.1	-	0.7	3.3	1.1	-	-	-	-	-
Metridia lucens	-	0.0	-	-	-	-	-	-	-	2.2	-
Oithona plumifera	7.9	5.3	1.2	2.9	3.3	1.1	6.7	6.9	5.5	3.9	3.0
O. similis	-	-	0.6	-	-	1.1	0.8	-	-	0.8	2.3
Oncaea media	3.7	2.1	2.4	2.2	-	3.2	0.8	4.1	3.7	-	0.8
O. venusta	7.4	5.9	4.2	16	1.1	7.6	5.0	8.3	6.4	0.8	1.5
Corycaeus spp	2.1	1.6	6.0	-	3.3	2.7	0.8	2.8	1.8	-	0.8
Copepodite stage larva	8.5	1.1	5.4	9.4	5.6	6.0	7.6	14	1.8	1.2	9.1
Nauplius stage larva	-	-	-	-	-	-	-	-	-	-	-
Evadne tergestina	0.5	0.5	-	-	3.3	0.5	-	-	-	-	14
Podon schmackeri	-	-	-	-	-	0.5	-	-	-	-	-
Penilia schmackeri	1.1	3.2	-	-	29	9.7	5.9	1.4	5.5	-	17
Crustacea (misc.)	2.9	5.8	0.3	0.3	1.3	2.3	3.7	0.3	1.1	4.3	2.7
Doliolum denticulatum	-	-	0.2	0.7	-	-	3.4	-	-	-	-
D. tritonis	-	0.5	-	-	-	-	0.2	-	-	1.5	8.3
Copelata	7.9	4.3	0.6	0.7	10	13	5.9	-	3.7	0.8	3.8
Pelagic eggs	7.9	-	-	2.2	-	7.0	4.2	-	0.9	-	-

TABLE B-7b. Minor zooplankton constituents (less than 3% at any station) taken with "O" net (100-0 m) at Ryofu Maru stations.

Pyrocystis fusiformis	451, 456, 457, 459, 464, 466, 471, 472, 474, 475, 481, 484, 489, 491, 493, 495, 501
Polychaeta	448, 451, 454, 456, 458, 459, 460, 461, 464, 466, 468, 472, 477, 481, 484, 493, 497, 501, 502
Eukrohnia hamata	461
Krohnitta pacifica	459, 466
K. subtilis	464, 472, 475, 487
Pterosagitta draco	448, 451, 454, 456, 457, 460, 464, 466, 468, 471, 472, 474, 475, 481, 484, 487, 489, 493, 495, 506
Sagitta ai	457, 466, 468, 474, 475, 481, 495, 501
S. bedoti	451, 452, 458, 459, 461, 468, 471, 472, 477, 480, 487, 491, 493, 495, 497, 499, 501, 502, 506
S. bipunctata	457, 459, 468, 472, 493
S. elegans	461, 501
S. enflata	448, 451, 454, 456, 457, 459, 460, 461, 464, 466, 468, 472, 474, 475, 480, 481, 484, 487, 489, 493, 495, 499, 502, 403
S. hexaptera	448, 466, 472, 474
S. lyra	451, 466, 471, 499
S. pseudoserratodentata	464, 487, 495
S. regularis	448, 451, 454, 456, 457, 459, 464, 466, 468, 472, 474, 475, 480, 481, 484, 487, 489, 491, 493, 495, 497, 499, 501-504
S. robusta	459, 472, 475
S. serratodentata	448, 451, 454, 456, 457, 460, 466, 472, 475, 481, 487, 489, 491, 493, 495
S. spp	459, 481, 491
Calanus cristatus	461
C. darwini	448, 451, 454, 456, 457, 459, 460, 464, 466, 472, 474, 475, 481, 484, 487, 489, 491, 493, 495, 499, 501-503
C. gracilis	448, 451, 454, 456, 457, 459, 460, 474, 502
C. minor	454, 456, 457, 459, 460, 464, 466, 468, 471, 472, 474, 475, 480, 481, 484, 487, 489, 491, 493, 495, 499, 502, 503
C. naunen	451, 454, 456, 457, 460, 472, 474, 491, 495, 501, 503
C. pulmchrus	458, 461, 499, 506
C. robustior	454, 466, 475, 481
C. tenuicornis	458, 461, 475, 487, 489, 499, 503, 504, 506
C. vulgaris	448, 451, 454, 456, 460, 461, 464, 466, 468, 472, 480, 491, 501, 503
Eucalanus attenuatus	448, 451, 454, 456, 459, 460, 464, 466, 468, 472, 475, 480, 481, 487, 489, 493, 495, 501, 502
E. bungi bungi	452, 458, 461, 468
E. bungi californicus	468, 471, 477, 484, 491, 499, 501
E. crassus	491
E. elongatus	448, 464, 468, 471, 472, 477, 480, 484, 489, 491, 493, 497, 499, 501, 502
E. mucronatus	457, 491, 501
E. piliatus	451, 475, 484, 487, 489, 491, 493
E. subcrassus	448, 451, 454, 459, 460, 464, 466, 468, 472, 474, 475, 477, 484, 489, 491, 493, 495, 501-503, 506
Rhincalanus cornutus	449, 457, 460, 502
R. nasutus	464, 471, 472, 477, 497, 499, 501
Paracalanus parvus	451, 452, 454, 456-458, 460, 464, 466, 468, 472, 474, 475, 477, 480, 481, 484, 489, 491, 495, 497, 499, 501, 502
Acrocalanus gibber	451, 454, 468, 472, 474, 481, 495, 497
A. gracilis	454, 466, 475, 480, 487, 493, 495, 502, 503
A. monachus	454, 456, 466
Calocalanus pavo	454, 457, 464, 472, 474, 475, 480, 481, 484, 487, 491, 493, 495, 499, 503
Aetideus giesbrechti	457, 475, 487, 493, 495, 497, 502
Undeuchaeta major	495
U. plumosa	448, 464, 474
Euchirella amoena	474, 475, 484, 487, 495
E. pulchra	464
Euchaeta longicornis	448, 451, 454, 456, 457, 460, 474, 475, 481, 489, 493, 495, 502, 503
E. marina	448, 451, 452, 454, 456, 457, 459, 464, 466, 471, 472, 475, 481, 487, 489, 493, 495, 502, 503
E. media	460, 464, 474, 475, 491, 495, 502

Table B-7b, continued

Euchaeta wolfendeni	472, 481, 497, 502, 503
Pareuchaeta flava	461, 504
P. japonica	458
Scaphocalanus echinatus	477, 495, 504
Scolecithrix danae	448, 451, 454, 456, 457, 459, 460, 464, 466, 472, 474, 480, 481, 484, 487, 489, 491; 493, 495, 499, 501-504
Plaenna spinifera	454, 502
Centropages bradyi	452
C. elongatus	493, 497, 499
C. longicornis	487
C. violaceus	448, 457, 466, 474, 480, 481, 484, 503
Temora discaudata	451, 452, 457, 460, 472, 474, 475, 477, 480, 493, 499, 506
T. stylifera	484, 497, 499
Metridia longa	458
Pleuromamma abdominalis	448, 451, 458, 460, 464, 474, 477, 484, 487, 495, 501, 504
P. gracilis	448, 461, 460, 474, 477, 484, 487, 491, 495
P. xiphias	451, 460, 464, 474, 484
Lucicutia flavicornis	448, 451, 454, 456, 457, 459-461, 474, 480, 489, 493, 495, 502
Heterorhabdus papilliger	451, 460, 468, 495, 504
Haloptilus acutifrons	457, 460, 481, 487
H. longicornis	475, 493, 495
H. oxycephalus	457
Candacia aethiopica	451, 457, 474, 489, 493
C. bipinnata	451, 454, 458, 459, 468, 477, 480, 484, 491, 506
C. bispinosa	457, 464, 474, 489, 495
C. catula	497
C. discaudata	480, 491, 506
C. longimana	464
C. pachydactyla	448, 466, 489
C. pectinata	464, 499, 501
C. truncata	454, 457, 460, 466, 484, 489, 493, 497, 501, 502
Labidocera detruncata	448, 471, 475
L. japonica	501, 506
L. pavo	461
Pontellina plumata	451, 454, 456, 457, 464, 466, 474, 481, 501
Acartia danae	456, 457, 460, 475, 480, 484, 487, 489, 491, 495, 497, 499, 503
A. negligens	448, 451, 454, 456, 457, 464, 466, 472, 474, 477, 480, 481, 487, 491, 493, 497, 499, 502, 503
Oithona nana	448
Setella gracilis	460, 466, 472, 484
Microsetella rosea	499
Clytemnestra rostrata	484, 499
C. scutellata	451, 480
Oncaea conifera	460, 472, 474
Lubbockia squillimana	459, 487, 493
Sapphirina gemma	460
S. metallina	474, 475
S. nigromaculata	451, 454, 456-459, 461, 464, 468, 503
S. intestinata	451, 460, 461, 472, 475, 489, 501, 502
S. opalina	458, 459, 464, 466, 480, 491, 495
S. scarlata	481, 503
S. stellata	480, 481

Table B-7b, continued

Sapphirina spp	448, 472, 495, 497, 502, 503
Copilia longistylis	464, 475
C. mirabilis	448, 451, 452, 454, 456, 457, 459, 464, 466, 468, 474, 475, 480, 481, 484, 487, 489, 491, 493, 495, 497, 499, 501-503
C. quadrata	456, 460, 472, 474, 481, 487, 493, 502
C. spp	451, 454, 456, 460, 464, 466, 474, 475, 481, 487, 491, 493, 503
Pachysoma dentatum	481, 487
Conchoecia spp	448, 451, 454, 456-460, 464, 474, 475, 477, 481, 487, 493, 495
Lucifer raynaudi	448, 451, 454, 456, 457-461, 464, 466, 468, 472, 474, 475, 477, 481, 484, 487, 489, 491, 495, 501, 503, 506
Pteropoda	454, 484, 487, 491, 493, 501
Doliolum nationalis	452, 501
Thalia democratica v. orientalis	451, 501
Siphonautes larva	448, 466, 497, 501
Balanus nauplius larva	452, 466
Trochophora larva	454, 458, 461, 464, 491, 499, 501
Bipinnaria larva	452, 454
Pyllosoma larva	456
Brachyura zoea larva	448, 451, 454, 464, 466, 472
Megalopa larva	448, 464
Ophiopluteus larva	448, 451, 452, 454, 456, 459, 460, 461, 464, 466, 472, 487, 489, 501-503, 506
Asteroidea larva	452, 459, 461
Lamellibranchia larva	451, 456, 457, 459, 464, 466, 468, 472, 474, 475, 480, 481, 484, 491, 493, 495, 497, 501, 503, 504
Gastropoda larva	448, 451, 454, 456, 457, 459, 460, 464, 466, 471, 472, 474, 475, 480, 481, 484, 491, 493, 495, 497, 499, 501-503
Dacapoda larva	451, 454, 460, 464, 468, 484, 491, 503
Fish larva	448, 451, 452, 454, 456-461, 464, 466, 472, 474, 475, 484, 487, 491, 493, 495, 501-504, 506
Pelagic eggs	448, 452, 460, 461, 471, 474, 475, 480, 489, 495, 499, 501, 503

TABLE B-8a. Major zooplankton constituents of large and small organisms by per cent taken with "O" net (100-0 m) at Shumpu Maru (KMO) stations. a)

Station	I-1	I-2	I-3	I-4	I-5	I-6	I-7	I-8	K-1	K-2	K-3
No. of total zooplankton/m^3	43(1)	37(1)	29(1)	31(1)	35(1)	41(1)	44(1)	40(1)	81(1)	48(1)	42(1)
No. of zooplankton (large size)/m^3	43(0)	49(0)	22(0)	30(0)	30(0)	61(0)	38(0)	35(0)	46(0)	37(0)	40(0)
No. of zooplankton (small size)/m^3	39(1)	32(1)	26(1)	28(1)	32(1)	35(1)	41(1)	36(1)	76(1)	45(1)	38(1)
Zooplankton (large size) %	10.0	13.3	7.7	9.6	8.6	14.7	8.8	8.8	5.7	7.7	9.5
Zooplankton (small size) %	90.0	86.7	92.3	90.4	91.4	85.3	91.2	91.2	94.3	92.3	90.5
ZOOPLANKTON (large size) %	100	100	100	100	100	100	100	100	100	100	100
Calanus finmarchicus	2.8	-	3.6	2.6	6.6	1.9	2.1	3.4	14	5.4	4.0
C. tenuicornis	-	-	-	-	1.3	0.7	16	1.1	-	2.2	-
C. minor	-	-	-	5.3	-	7.1	3.2	5.7	-	-	7.0
C. darwini	2.8	11	15	1.3	7.9	-	4.2	2.3	-	-	5.0
Neocalanus juv.	1.9	-	7.3	1.3	3.9	-	-	-	3.4	1.1	-
Eucalanus attenuatus	4.7	1.6	5.5	2.6	3.9	6.5	4.2	1.1	3.4	3.3	5.0
E. attenuatus f. major	0.9	-	3.6	-	-	0.7	-	-	-	-	-
E. subtenuis	10	8.1	1.8	-	6.6	34	22	30	6.9	5.4	5.0
E. pileatus	10	14	1.8	3.9	6.6	12	-	1.1	22	17	3.0
Scolecithrix danae	4.7	8.9	3.6	-	1.3	0.7	-	-	1.7	1.1	-
Scolecithricella dentata	-	-	-	-	-	-	-	-	-	-	-
Pleuromamma abdominalis	-	-	-	2.6	2.6	0.7	-	-	-	-	1.0
P. gracilis	-	-	-	9.2	12	-	-	-	5.2	-	5.0
Sapphirina intestinata	-	-	7.3	-	-	-	-	-	-	-	-
Amphipoda	1.9	2.4	-	2.6	2.6	1.3	1.1	1.1	-	-	-
Euphausiacea	0.9	-	-	9.2	-	-	2.1	-	-	2.2	8.9
Lucifer raynaudi	2.8	0.8	7.3	6.6	-	-	2.1	5.7	-	3.3	5.0
Sagitta enflata	15	7.1	3.6	12	5.3	4.5	7.4	2.3	17	15	7.9
S. serratodentata f. pacifica	4.7	0.8	7.3	1.3	-	-	-	-	-	-	-
S. serratodentata (juv.)	0.9	3.3	5.5	1.3	1.3	-	4.2	2.3	1.7	4.3	4.0
S. regularis	4.7	3.3	5.5	9.2	3.9	6.5	5.3	21	1.7	16	18
S. minima	2.8	6.5	1.8	-	-	1.3	3.2	1.1	-	-	1.0
Pterosagitta draco	-	4.1	1.8	3.9	5.3	1.9	3.2	4.6	-	1.1	1.0
Salpa mucronatus	-	-	-	-	-	0.7	-	1.1	-	1.1	-
ZOOPLANKTON (small size) %	100	100	100	100	100	100	100	100	100	100	100
Globigerina bulloides	8.6	3.8	-	-	-	-	-	-	3.2	4.5	-
Foraminifera	2.1	1.3	-	4.3	5.0	4.6	6.9	6.6	3.2	2.7	-
Radiolaria	1.0	2.5	1.5	2.8	10	2.3	3.2	4.4	-	9.0	1.0
Noctiluca scintillans	-	-	-	-	-	-	-	-	3.2	-	-
Hydromedusae	4.1	2.5	3.0	2.8	2.5	6.9	5.9	-	3.2	1.8	2.4
Eucalanus juv.	-	1.3	-	0.0	1.2	6.9	-	1.1	-	-	-
Paracalanus parvus	-	2.5	1.5	-	2.5	4.6	-	-	11	0.9	6.3
Clausocalanus pergens	1.0	3.8	3.0	-	7.5	1.2	5.9	1.1	1.1	0.9	3.1
C. furcatus	1.0	1.3	1.5	1.4	2.5	1.2	4.0	-	-	5.4	4.2
Para-Clauso-calanus juv.	4.1	3.8	11	5.7	7.5	3.5	3.0	3.3	2.1	0.9	3.1
Euchaeta juv.	1.6	5.0	3.8	0.7	0.6	3.2	1.7	3.6	0.1	0.9	2.6
Lucicutia flavicornis	2.1	1.3	1.5	4.3	1.2	-	2.0	-	0.3	-	0.0
Gymnoplea juv.	1.0	2.5	-	-	-	-	1.0	-	3.2	0.9	3.1
Oithona plumifera	12	6.3	6.1	8.5	8.7	13	6.9	8.8	1.1	9.0	6.3
Oncaea venusta	14	12	6.1	16	7.5	3.5	3.0	6.6	4.2	12	11
Corycaeus spp	2.1	7.6	3.8	4.3	5.0	2.3	4.0	1.1	2.1	3.6	1.0
Evadne tergestina	-	-	-	-	-	-	-	1.1	6.5	0.9	-
Penilia schmackeri	-	-	-	-	-	-	-	-	26	3.6	-
Sagitta juv.	5.2	4.1	2.3	3.9	2.2	6.5	3.5	3.3	3.7	5.6	5.8
Oikopleura fusiformis	-	2.5	14	5.7	1.2	4.6	1.0	12	2.1	0.9	5.2
O. longicauda	4.1	5.0	4.5	5.7	-	9.2	2.0	16	3.2	4.5	7.3
O. juv.	4.1	5.0	6.1	1.4	1.2	1.2	2.0	4.4	1.1	3.6	2.1
Fritillaria borealis f. sargassi	2.1	2.5	3.0	-	1.2	1.2	-	1.1	1.1	0.9	3.1
F. juv.	2.1	5.0	-	1.4	2.5	1.2	2.0	1.1	-	4.5	7.3
Copepoda nauplius	6.2	2.5	1.5	-	1.2	1.2	-	1.1	2.1	1.8	-

a) Identified by K. Furuhashi.

Table B-8a, continued

Station	K-4	K-5	K-6	K-7	K-8	G-1	G-2	G-3	G-4	G-5	G-6
No. of total zooplankton/m^3	30(1)	34(1)	37(1)	45(1)	34(1)	14(2)	12(2)	45(1)	39(1)	39(1)	41(1)
No. of zooplankton (large size)/m^3	26(0)	27(0)	30(0)	36(0)	26(0)	81(1)	10(1)	64(0)	31(0)	46(0)	48(0)
No. of zooplankton (small size)/m^3	27(1)	31(1)	34(1)	42(1)	32(1)	13(2)	11(2)	38(1)	36(1)	34(1)	36(1)
Zooplankton (large size) %	8.7	7.9	8.1	7.9	7.6	5.9	8.4	14.3	7.9	11.8	11.6
Zooplankton (small size) %	91.3	92.1	91.9	92.1	92.4	94.1	91.6	85.7	92.1	88.2	88.4
ZOOPLANKTON (large size) %	100	100	100	100	100	100	100	100	100	100	100
Calanus finmarchicus	-	2.2	3.3	6.6	-	-	25	1.3	5.1	0.9	0.8
C. tenuicornis	7.8	6.7	15	14	11	8.9	-	-	-	7.0	6.7
C. minor	9.4	3.7	4.6	9.9	-	6.0	1.5	1.3	-	4.3	9.2
C. darwini	4.7	0.7	0.7	1.1	1.5	1.0	3.1	1.9	9.0	0.9	5.0
Neocalanus juv.	-	8.2	2.6	1.1	-	-	-	-	3.8	3.5	4.2
Eucalanus attenuatus	4.7	3.7	0.7	2.2	7.6	1.0	-	1.9	6.4	3.5	2.5
E. attenuatus f. major	-	-	-	-	-	-	-	0.6	-	-	0.8
E. subtenuis	23	29	30	6.6	7.6	3.0	2.3	2.5	2.6	34	20
E. pileatus	-	-	-	-	1.5	29	26	48	-	1.7	3.3
Scolecithrix danae	-	-	-	-	-	-	0.8	2.5	3.8	0.9	1.7
Scolecithricella dentata	-	-	-	-	6.1	-	-	-	-	-	-
Pleuromamma abdominalis	-	-	-	-	-	-	-	-	1.3	-	-
P. gracilis	-	-	0.7	1.1	4.5	-	-	-	10	-	-
Sapphirina intestinata	-	-	-	-	-	-	0.8	-	-	-	0.8
Amphipoda	3.1	-	0.7	8.8	1.5	1.0	-	3.1	1.3	0.9	-
Euphausiacea	-	3.0	0.7	4.4	4.5	-	3.1	-	5.1	-	0.8
Lucifer raynaudi	1.6	9.0	0.7	5.5	1.5	2.0	-	1.9	1.3	9.6	0.8
Sagitta enflata	1.6	1.5	9.2	3.3	4.5	13	8.5	15	7.7	-	4.2
S. serratodentata f. pacifica	-	-	-	-	-	-	-	-	-	0.9	0.8
S. serratodentata (juv.)	3.1	0.7	1.3	1.1	6.1	1.0	-	1.9	2.6	3.5	2.5
S. regularis	19	6.7	4.6	1.1	9.1	16	7.7	7.5	6.4	5.2	5.8
S. minima	-	3.7	-	3.3	1.5	9.9	7.7	0.6	1.3	5.2	8.3
Pterosagitta draco	7.8	5.2	3.9	4.4	7.6	-	-	1.3	-	3.5	5.0
Salpa mucronatus	-	-	-	-	-	-	0.8	0.6	-	-	0.8
ZOOPLANKTON (small size) %	100	100	100	100	100	100	100	100	100	100	100
Globigerina bulloides	-	-	-	1.9	-	1.8	10	-	-	-	-
Foraminifera	1.5	0.6	1.8	-	-	0.6	0.7	5.2	3.3	2.3	-
Radiolaria	-	7.0	6.1	2.9	3.8	1.2	4.3	11	1.1	4.6	5.5
Noctiluca scintillans	1.5	-	-	-	-	-	-	-	-	-	-
Hydromedusae	1.8	2.2	4.4	8.6	2.5	5.6	1.4	2.3	5.5	7.2	2.5
Eucalanus juv.	-	0.6	0.9	1.0	1.3	0.6	1.4	1.0	-	1.2	-
Paracalanus parvus	-	1.3	0.9	0.9	-	2.5	10	5.2	1.1	-	-
Clausocalanus pergens	1.5	7.0	5.5	2.9	2.5	0.6	0.7	3.1	3.3	1.2	6.6
C. furcatus	2.9	1.3	3.5	6.7	5.0	1.8	2.1	-	3.3	5.8	7.7
Para-Clauso-calanus juv.	7.3	5.7	7.0	5.7	7.6	2.5	0.7	3.1	5.5	1.2	7.7
Euchaeta juv.	1.5	1.6	0.0	1.2	1.3	0.8	0.2	6.8	2.2	3.5	1.4
Lucicutia flavicornis	0.0	1.3	0.9	-	3.8	-	0.2	-	-	6.1	1.1
Gymnoplea juv.	1.5	0.6	1.8	1.9	2.5	-	0.7	-	2.2	1.2	2.2
Oithona plumifera	15	7.6	8.8	6.7	8.8	4.9	2.1	8.3	5.5	13	6.6
Oncaea venusta	13	8.9	-	11	10	11	12	11	7.7	12	9.9
Corycaeus spp	12	4.5	7.9	1.9	10	8.0	0.7	1.0	1.1	5.8	1.1
Evadne tergestina	1.5	0.6	1.8	-	-	-	1.4	-	-	-	-
Penilia schmackeri	-	-	-	-	-	27	23	-	-	-	-
Sagitta juv.	3.3	4.5	1.8	1.4	2.5	2.5	3.0	3.1	7.2	3.5	0.8
Oikopleura fusiformis	4.4	1.9	2.6	2.9	2.5	1.2	4.3	-	7.7	2.3	7.7
O. longicauda	2.9	7.0	4.4	9.6	6.3	3.7	4.3	5.2	3.4	1.2	7.7
O. juv.	1.5	1.3	7.9	3.8	5.0	3.7	3.6	2.1	9.9	-	6.6
Fritillaria borealis f. sargassi	-	-	1.8	-	-	0.6	0.7	3.1	1.1	-	1.1
F. juv.	1.5	0.6	2.6	2.9	1.3	1.2	-	2.1	1.1	-	3.3
Copepoda nauplius	1.5	3.2	-	1.0	-	0.6	-	4.2	-	-	-

Table B-8a, continued

Station	G-7	H-1	H-2	H-3	H-4	H-5	H-6	H-7	H-8	U-1	U-2
No. of total zooplankton/m^3	54(1)	14(2)	53(1)	14(2)	42(1)	40(1)	57(1)	47(1)	58(1)	71(1)	65(1)
No. of zooplankton (large size)/m^3	57(0)	10(1)	59(0)	16(1)	34(0)	44(0)	45(0)	48(0)	50(0)	56(0)	73(0)
No. of zooplankton (small size)/m^3	48(1)	13(2)	47(1)	12(2)	49(1)	36(1)	52(1)	42(1)	53(1)	65(1)	58(1)
Zooplankton (large size) %	10.6	7.6	11.2	11.5	8.1	11.0	8.0	10.6	8.6	7.8	11.2
Zooplankton (small size) %	89.4	92.4	88.8	88.5	91.9	89.0	92.0	89.4	91.4	92.2	88.8
ZOOPLANKTON (large size) %	100	100	100	100	100	100	100	100	100	100	100
Calanus finmarchicus	5.6	7.7	6.8	4.6	-	0.9	2.6	1.7	1.6	2.8	0.5
C. tenuicornis	1.4	1.5	-	3.6	-	0.9	-	4.2	5.6	8.5	12
C. minor	4.9	-	2.0	1.5	3.5	1.8	-	2.5	3.2	0.7	3.8
C. darwini	1.4	1.5	-	0.5	4.7	3.6	3.5	1.7	1.6	2.1	2.2
Neocalanus juv.	4.9	-	-	0.5	3.5	0.9	-	1.7	2.4	6.4	1.1
Eucalanus attenuatus	3.5	2.3	-	2.0	-	0.9	3.5	-	0.8	0.7	-
E. attenuatus f. major	-	-	-	0.5	-	-	3.5	2.5	-	-	1.1
E. subtenuis	18	4.6	-	2.5	5.9	5.4	12	14	17	7.1	7.1
E. pileatus	8.4	18	2.7	11	4.7	14	21	3.3	1.6	7.8	6.6
Scolecithrix danae	1.4	1.5	-	-	11	5.4	0.9	0.8	0.8	2.1	1.1
Scolecithricella dentata	-	-	-	-	-	-	-	0.8	-	-	-
Pleuromamma abdominalis	-	-	6.8	5.6	-	-	-	5.8	4.8	-	-
P. gracilis	-	-	27	19	-	-	-	11	8.8	-	-
Sapphirina intestinata	-	-	-	-	2.4	-	-	-	-	-	-
Amphipoda	-	5.4	0.7	0.5	-	5.4	-	1.7	2.4	-	2.7
Euphausiacea	-	-	7.4	3.6	1.2	-	0.9	6.7	4.8	-	0.5
Lucifer raynaudi	2.1	1.5	-	1.0	3.5	0.9	2.6	5.0	0.8	1.4	1.1
Sagitta enflata	4.9	14	0.7	5.6	12	18	6.1	2.5	4.8	12	13
S. serratodentata f. pacifica	0.7	0.8	-	0.5	2.4	0.9	-	-	0.8	-	-
S. serratodentata (juv.)	4.2	1.5	-	1.0	5.9	2.7	8.8	1.7	4.8	0.7	0.5
S. regularis	14	5.4	4.1	2.0	19	4.5	-	8.3	9.6	12	6.6
S. minima	1.4	15	29	22	-	1.8	15	1.7	0.8	17	25
Pterosagitta draco	0.7	-	-	-	2.4	2.7	2.6	7.5	5.6	0.7	0.5
Salpa mucronatus	-	0.8	-	-	-	-	-	0.8	0.8	-	-
ZOOPLANKTON (small size) %	100	100	100	100	100	100	100	100	100	100	100
Globigerina bulloides	-	1.9	2.6	9.8	8.2	-	15	-	5.3	6.2	10
Foraminifera	1.7	-	1.7	2.0	4.9	-	0.8	3.8	3.8	3.7	-
Radiolaria	17	18	5.1	20	9.0	7.8	12	9.5	12	8.7	4.2
Noctiluca scintillans	-	1.3	1.7	-	-	-	-	-	-	-	-
Hydromedusae	2.1	1.5	0.9	4.0	2.5	3.9	2.3	3.8	4.5	5.7	1.0
Eucalanus juv.	-	0.6	0.9	0.7	0.0	-	1.5	1.9	0.8	-	-
Paracalanus parvus	-	2.5	1.7	1.3	-	2.2	0.8	1.9	0.8	-	2.8
Clausocalanus pergens	5.0	7.6	5.1	2.6	2.5	2.2	2.3	4.7	0.8	3.1	3.5
C. furcatus	1.7	4.4	2.6	0.7	5.8	3.4	-	0.9	0.8	3.7	2.1
Para-Clauso-calanus juv.	7.5	5.7	3.4	3.9	4.9	3.4	3.1	6.6	8.3	5.6	8.3
Euchaeta juv.	1.7	0.2	1.3	0.2	0.8	3.1	3.9	3.3	0.4	0.5	1.9
Lucicutia flavicornis	-	-	-	0.7	0.8	-	-	-	3.0	-	4.2
Gymnoplea juv.	-	1.3	6.0	0.7	-	-	0.8	-	0.8	1.9	0.7
Oithona plumifera	10	2.5	10	8.5	4.9	9.0	6.9	8.5	6.8	7.4	7.6
Oncaea venusta	10	18	14	8.5	16	14	16	6.6	8.3	20	17
Corycaeus spp	0.8	1.9	3.4	2.0	3.3	4.5	0.8	1.9	4.5	1.9	0.7
Evadne tergestina	-	-	-	0.7	-	-	-	-	-	0.6	-
Penilia schmackeri	-	15	5.1	7.2	-	-	-	-	-	3.7	1.4
Sagitta juv.	4.6	6.4	5.8	2.8	4.9	6.2	4.6	4.3	6.1	7.7	3.3
Oikopleura fusiformis	1.7	-	-	0.7	3.3	2.2	3.1	5.7	3.0	-	1.4
O. longicauda	6.6	0.6	5.1	0.7	4.1	3.4	3.9	6.6	3.0	1.3	1.4
O. juv.	5.0	-	3.4	2.0	6.6	1.1	3.9	2.8	3.0	1.3	4.9
Fritillaria borealis f. sargassi	-	0.6	-	0.7	0.8	1.1	0.8	0.9	0.8	-	0.7
F. juv.	3.3	-	2.6	1.3	0.8	2.2	3.1	0.9	1.5	1.9	4.2
Copepoda nauplius	1.7	1.9	0.9	-	-	-	-	-	0.8	1.3	2.1

Table B-8a, continued

Station	U-3	U-4	U-5	U-6	N-1	N-2	N-3	N-4	N-5	N-6	N-7
No. of total zooplankton/m^3	36(1)	57(1)	51(1)	47(1)	16(2)	82(1)	43(1)	14(2)	50(1)	43(1)	59(1)
No. of zooplankton (large size)/m^3	43(0)	55(0)	60(0)	47(0)	12(1)	50(0)	42(0)	11(1)	35(0)	48(0)	44(0)
No. of zooplankton (small size)/m^3	31(1)	52(1)	45(1)	42(1)	15(2)	77(1)	39(1)	13(2)	47(1)	38(1)	55(1)
Zooplankton (large size) %	12.1	9.6	11.8	10.0	7.2	6.1	9.4	7.7	7.0	11.2	7.4
Zooplankton (small size) %	87.9	90.4	88.2	90.0	92.8	93.9	90.6	92.3	93.0	88.8	92.6
ZOOPLANKTON (large size) %	100	100	100	100	100	100	100	100	100	100	100
Calanus finmarchicus	6.5	3.6	-	0.9	17	24	6.6	9.6	6.8	4.2	4.5
C. tenuicornis	9.3	1.5	2.0	-	1.4	5.6	-	6.7	-	-	0.9
C. minor	6.5	0.7	1.3	-	-	1.6	-	1.5	4.5	0.8	-
C. darwini	0.9	0.7	4.6	2.6	3.4	-	3.8	3.0	6.8	9.2	0.9
Neocalanus juv.	0.9	0.7	2.0	4.3	-	1.6	-	-	2.3	2.5	1.8
Eucalanus attenuatus	-	-	0.7	2.6	2.8	0.8	-	0.7	3.4	1.7	1.8
E. attenuatus f. major	-	-	0.7	-	-	1.6	-	-	-	4.2	7.2
E. subtenuis	4.7	3.6	7.3	6.0	9.7	3.2	-	-	5.7	3.3	4.5
E. pileatus	-	13	18	20	21	18	3.8	27	11	9.2	12
Scolecithrix danae	7.5	0.7	6.0	4.3	4.1	1.6	3.8	-	5.7	9.2	1.8
Scolecithricella dentata	-	-	0.7	-	-	-	-	-	-	-	-
Pleuromamma abdominalis	-	1.5	-	-	-	-	7.5	-	-	-	2.7
P. gracilis	10	6.6	-	-	-	-	8.5	-	-	-	6.3
Sapphirina intestinata	-	-	-	-	-	-	-	-	-	-	-
Amphipoda	-	3.6	0.7	2.6	1.4	1.6	3.8	3.0	2.3	4.2	0.9
Euphausiacea	5.6	2.2	-	1.7	-	0.8	2.8	-	1.1	0	5.4
Lucifer raynaudi	0.9	-	2.0	7.7	0.7	1.6	-	-	-	4.2	5.4
Sagitta enflata	9.3	6.6	15	7.7	4.1	6.3	17	15	13	8.3	14
S. serratodentata f. pacifica	0.9	-	-	0.9	2.8	0.8	-	-	-	0.8	-
S. serratodentata (juv.)	-	-	2.6	0.9	-	1.6	0.9	-	-	2.5	2.7
S. regularis	-	9.5	3.3	10	2.8	4.0	9.4	12	10	9.2	6.3
S. minima	25	32	11	-	6.2	4.0	22	7.4	-	-	2.7
Pterosagitta draco	0.9	-	-	5.1	-	-	-	-	3.4	6.7	3.6
Salpa mucronatus	-	-	-	-	0.7	4.0	-	-	-	0.8	6.3
ZOOPLANKTON (small size) %	100	100	100	100	100	100	100	100	100	100	100
Globigerina bulloides	-	-	6.2	11	2.1	1.6	-	-	14	6.3	4.4
Foraminifera	1.3	2.3	-	3.8	2.7	3.1	5.2	6.7	3.4	3.2	0.7
Radiolaria	2.6	3.9	7.1	8.5	22	22	17	19	18	11	10
Noctiluca scintillans	-	0.8	0.9	-	-	-	8.3	-	-	-	-
Hydromedusae	0.0	1.7	1.8	2.8	1.7	2.9	4.7	2.5	1.7	4.2	3.3
Eucalanus juv.	-	-	0.9	0.9	1.1	-	1.0	0.6	0.9	-	1.5
Paracalanus parvus	2.6	1.5	8.0	1.9	4.8	4.7	7.3	0.6	1.7	3.2	0.7
Clausocalanus pergens	5.5	1.5	2.7	0.9	-	-	1.0	1.8	0.9	3.2	5.1
C. furcatus	1.3	4.6	7.1	1.9	2.7	1.6	-	1.8	0.9	1.1	6.5
Para-Clauso-calanus juv.	9.0	9.3	7.1	2.8	2.7	5.7	6.2	6.1	2.6	7.4	6.5
Euchaeta juv.	1.6	0.2	1.3	3.3	2.5	0.5	1.6	0.8	1.1	3.4	3.3
Lucicutia flavicornis	-	0.8	-	0.9	2.1	-	-	1.2	0.0	-	0.7
Gymnoplea juv.	3.8	2.3	-	-	-	1.6	-	-	0.9	-	-
Oithona plumifera	9.0	3.1	2.7	1.9	2.7	2.6	-	1.8	6.0	-	9.4
Oncaea venusta	13	22	5.4	6.6	19	6.8	10	9.8	10	-	6.5
Corycaeus spp.	1.3	1.5	4.5	2.8	1.1	2.1	1.0	1.8	4.3	2.1	3.6
Evadne tergestina	-	-	-	-	-	-	-	-	-	-	0.7
Penilia schmackeri	13	19	1.8	-	2.1	2.6	6.2	28	-	-	-
Sagitta juv.	3.2	4.6	4.0	7.1	0.7	2.2	3.4	2.9	1.7	4.5	0.9
Oikopleura fusiformis	-	-	-	-	1.1	3.1	2.1	-	-	3.2	1.5
O. longicauda	1.3	0.8	2.7	7.6	3.7	7.3	7.3	0.6	3.4	6.3	4.4
O. juv.	2.6	3.1	2.7	4.8	4.2	9.9	3.1	1.2	0.9	5.3	3.6
Fritillaria borealis f. sargassi	2.6	-	0.9	1.9	2.7	-	1.0	-	-	7.4	1.5
F. juv.	3.8	-	2.7	4.8	1.1	2.1	-	0.6	2.6	6.3	0.7
Copepoda nauplius	1.3	0.8	5.4	2.8	1.6	2.6	3.1	0.6	-	-	0.7

TABLE B-8b. Minor zooplankton constituents (less than 6% at any station) taken with "O" net (100-0 m) at Shumpu Maru (KMO) stations.

ZOOPLANKTON (large size) by stations	
Calanus pauper	I2, 4, 5, G6, 7, H1, 3-5, U1-3, N5, 6
C. gracilis	I6, K3, G6, U2, 4, 6, N1, 6
C. robustior	N1, 5
C. vulgaris	I1, 2, 4, 5, 7, K1, 6, G1-4, 6, 7, H1, 4-6, U1-6, N1, 2, 4-6
Eucalanus attenuatus form?	K2, H1, 6, N1
E. elongatus	I6, H2, N2
E. crassus	I3, G2, H1, U1, N1, 4
E. mucronatus	I1, 8, K5, 7, U5
E. subcrassus	I1-6, K1, 2, 7, G1-3, 7, H3, 7, U1, 2, 5, 6, N1-6
Rhincalanus cornutus	I1, 2, 8, G2, H1, U5, N2, 5, 6
R. nasutus	H3
Aetideus armatus	K7, 8, G6, H2, U3, 5, N4
A. giesbrechti	I1, K6, 8, U5
Gaetanus juv.	N3
Euchirella pulchra	H1, U2
E. emoena	H2
E. areata	H5
Undeuchaeta plumosa	I4, H2, 8
U. juv.	I5, G4, U4
Euchaeta marina	I1-3, 5-7, K2, 3, G3, 4, 6, 7, H3-6, U1, 3-6, N1-3, 5, 6
E. plana	H1
E. wolfendeni	I1-6, K3, G5, H5-8, U2, 3, 5, 6, N5
E. longicornis	I5-8, K3, 4, 7, 8, G4, 7, H2, 4, U1-3, 5, N1, 2, 7
E. media	H2, 3, 8, U4
Pareuchaeta russeli	H3, U1, 2, 4, 5, N1
Phaenna spinifera	G6
Scolecithricella emerginata	I5, U2, 4, N3
S. ctenopus	K6
Centropages calaninus	I2, K6, G1, H5, 7, U1
C. gracilis	I4, K2, 6, G2, H7, U4, 5, N2
C. furcatus	G1, H2, 3, U5, N2
C. longicornis	K5, H3, 5, N4
C. elongatus	I4, 5, K1, 7
Pleuromamma xiphias	I4, K3, 7, H2
P. robusta	I4, U3, 4
Heterorhabdus papilliger	I1, 6, 7, K4-7, G6, H8, U1, 4, N3, 7
H. compactus	H3
Euaugaptilus sp	I1, K2
Haloptilus longicornis	I2, 3, 5-8, K1, 2, 5-7, G4, 5, N5, 7
H. spiniceps	K6, 8, H3, 8
H. acutifrons	I2, K2
H. oxicephalus	K6, 7
Candacia bipinnata	G1, 4, H3, U2, 4, N1, 3
C. pachydactyla	I4, U5
C. curta	I1
C. aethiopica	K5, 6, 8, G4
C. catula	K2, G4, H1, 3, 5, 6
C. truncata	I3, 4, K8, G3, 4, 6, H3-5, 7, U1, N1, 4-6
C. bispinosa	I1, 5, 8, K3-5, 7, G2, 4, 5, H5, 7, U5, 6
C. longimana	K7, U1
Labidocera detruncata	H6

Table B-8b, continued

Labidocera acutifrons	U5
L. juv.	I3, K4, 5, 7, G4
Pontella securifer	K7
Pontellina plumata	I8, K3, 5-7, G5, 6, H1, 6, N6
Sapphirina metallina	I2, N1, N6
S. angusta	U6
S. gemma	G1, U4, 6, N2
S. gastrica	K1, 3
S. darwini	K1, 2, H3, U6
S. opalina	I1, K4, U2
S. stellata	K4, 5, G7, U1, 5, N1, 2, 4
S. scarlata	I1, 2
S. nigromaculata	K2, G5, H1, 3, N3
Copilia mirabilis	I1, 2, 4-8, K1-4, 6, 8, G2-5, 7, H4-7, U2, 6, N1, 5-7
C. lata	I7, K7, G3, 7, H6, U5
C. longistylis	I5, 6, K2, 6, G4, 6
C. quadrata	I6, 7, K2, 7, G4, H4, U6
C. sp	K5
Pachysoma sp	I1, K5
Mysidacea	I3, 4, 6, K5, 6, G5, 6, H5, U3, 6, N5, 7
Sagitta hexaptera	I6, 7, K5, 6, G3, 6, H1, 7, 8, U6, N7
S. lyra	I2, 7, 8, K6, 8, G5, H7
S. bipunctata	I1, K5-7, G4, 7, H2, 5, 6, U6, N6
S. ferox	I7, K5, G4, 6, H8, N2
S. robusta	I2, K6, H8, N5
S. bedoti	I1, 2, 5, K1, 2, G2, 3, 7, H1-4, U2-5, N1-4
S. serratodentata f. atlantica pseudoserratodentata	I6, K3, 7, G5, H4, 7, 8
S. neglecta	K2, G2, 6, 7, H1, U5, N1, 2
Krohnitta subtilis	I5, 7, K2, 3, 6, 7, H8, U2, N2, 5, 6
K. pacifica	I2-4, 6, 7, K2, 6, 8, G4-7, H4-6, 8, U1-6, N5-7
Salpa fusiformis	I4, G4

ZOOPLANKTON (small size) by stations

Acanthometron pellucidum	I1, 8, K2-4, 6, G1, 2, 4-6, H4-7, U1, 2, 4, 5, N1, 2, 4, 6
Gazelletta hexanema	I1, 2, K1, H3
Calanus juv.	I1, 3, 4, 8, K1-8, G1, 3-7, H1-3, 5-8, U1, 3-6, N1, 2, 4, 5, 7
Mecynocera clausi	I1, 3, 4, 6, 7, K2-8, G1-3, 5-7, H1, 4, 6, U5, N5-7
Paracalanus aculeatus	I1, K3, G2, U6
Acrocalanus spp	I3, 4, 6, 7, K5-7, G1-3, 5, 7, H3, 5, 7, U1, N3, 5
A. juv.	I5, K3, 5, 6, G4
Calocalanus pavo	I1, 2, 4-8, K2, 3, 5-8, G1, 3-5, H1, 6, 8, U1, 5, N1-7
Clausocalanus arcuicornis	I3, 8, K1, G7, H8, U1, 2, 4, N4
Ctenocalanus vanus	U1-3, N1, 4
Euchirella juv.	I5, H2-4, N4
Temora discaudata	K5, 7, G2, U3, 5, N4, 6
T. juv.	K1, 5, 7, 8, G4-7, H2, 5, U1, N1
Centropages juv.	I5, 8, K7, G2, 5, H3, 8, U1, N2
Pleuromamma juv.	I5, 7, K2, 3, 7, 8, G4, H2, 3, 8, U3, 4
Candacia juv.	I1, 2, 4, 7, K4, 5, 7, 8, G1, 2, 4, H2, 3, 5-8, U1-3, 5, 6, N2, 4, 5
Acartia clausi	I6, K5, G4, 5, 7, H2, 4, 5, 7, U4, N1, 2, 5-7
A. danae	I6, 7, K5, 6, G1, H2-4, U3, 5, N7
A. negligens	I6-8, K2, 4, G5, H7, 8
A. juv.	I2, 3, 6-8, K5, 6, G2, 5, H2, 6, 8, U1, 5, N4, 5

Table B-8b, continued

Miracia sp	I6, H4
Oithona similis	I3, 4, 7, 8, K1-3, 5-8, N2
O. robusta	U6)
O. juv.	I2, 3, 5, 6, 8, K6-8, G7, H3, U2, 4-6, N2, 3, 5, 6
Setella gracilis	I2, 7, K2, 4, G3, H3-7, U5, 6, N5-7
Microsetella rosea	K3, H3, 5, 7, 8, U4
Euterpe acutifrons	U1)
Clytemnestra scutellata	G3, H2, U2, N1, 7
Lubbockia squillimana	I4, 7, K5-8, G5, 6, H5, 6, N2
Oncaea media	I4, 5, K8, N3)
Sapphirina juv.	I5, K3, G7, H3, 4, 6, U1, 5, N5, 6
Corycaeus gibbulus	I2, 4, 5, 8, K3, 4, 8, G3, 5, 6, H8, U2, 4, 5, N1, 4, 6, 7
C. concinna	I1, 4, 5, 8, K2-8, G4, 6, 7, H5, U1, N2, 5, 7
Copilia juv.	K2, 7, G3, U3
Podoplea juv.	H1, 8, N7
Conchoecia sp	I2, 3, K3, 5, H2, N5
C. juv.	I1-5, K1-7, G1, 5, H2, 3, 7, 8, U1, 2, 4-6, N1, 2, 4, 5, 7
Podon sp	K1, G2, H3
Creseis acicula	I6, K1, 3, 5, 6, 8, G4-6, H3-5, 7, N3, 6, 7
Pteropoda	I1, K1, U2, 5, N1
Oikopleura cophocerca	K2, G2, H4, 5, N6, 7
O. dioica	G1, 6, H1-3, 8, U1, 3, 4, N2
O. rufescens	I2, 3, K2, 4, 7, 8, G1, 3, 4, H3, U4, N1, 2, 6
O. sp	I6, K6, 7, G1, 3, 7, H4, 7, 8, U1, 6, N1)
Oikopleuridae	I1, 3-5, 8, K3, 4, 7, G2, 4, H8, U4, 6, N1-3, 7
Fritillaria haplostoma	I6, K2, G1, 3, H3, 6-8, U2, N1, 2, 5)
F. pellucida	I1, 3, K1, 2, G1, 7, H5, 8, U2, 6, N1, 2, 5-7
F. sp	I1, 5, K6, 7, N7
Doliolum denticulatum	H4
D. juv.	I3, 8, K2, G3, H3, 8, N5
Salpa juv.	I4, K3, G1, H3, 5, 7, 8, U5, N2, 5
Balanus nauplius	G1, H6
Gastropda veliger	I1, 4, 5, K1, 4, 5, G1, 3, 5, H7, U3-6, N1, 5, 7
Lamellibranchia veliger	H1, U6
Metanauplius larva	I5, K6, 7, G2, 5, H2, 3, 7, U6, N5
Mysis larva	I1, 6, 8, K1-8, G1, 2, 4-7, H2-8, U6, N1, 3-7
Pluteus larva	I6, K6, G3, 7, H4, 5, U1, 3, 5, N6)
Polychaeta larva	I1-7, K1, 2, 4-7, G1, 4, 6, 7, H1, 3, 5, 6, 8, U1-5, N2, 5-7
Other larva	I1, K6, 8, G2, 7, H1, 6, 7, U5, N1
Fish larva	I1, 4, 5, 8, K7, 8, G2-4, 6, H3, 6, U1, 2, 4-6, N2-5, 7
Fish eggs	K2, G7)

TABLE B-9. Major constituents (per cent of total volume) in series of closing-net hauls (aperture, 0.318 mm) taken between 400-0 meters at HMCS Ste. Therese stations.

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
1	0-50	0.06	tr			tr	98	tr	tr	Decapod
	50-100	0.06	tr				70	30	tr	Eggs
	100-150	0.032					99	tr	tr	Eggs
	150-200	0.032	tr			tr	99			
	0-100	0.016	1	tr	tr		98			Eggs
	200-300	0.016	tr	tr		tr	99		tr	Eggs
	0-250	0.01	tr			12	85	tr	tr	Decapod
	0-400	0.005	tr	tr		65	34	tr	tr	
2	0-50	0.04	1			3	92	1	3	Eggs
	50-100	0.016	1		tr	tr	95		4	Eggs
	100-150	0.016	tr		50	tr	50		tr	
	150-200	0.032	tr			tr	98		tr	
	0-100	0.02	tr		5		75		20	
	100-200	0.016	tr	tr	tr	20	75		5	
	200-300	0.016	tr		tr	tr	98		tr	
	300-400	0.02	tr		tr		98		tr	
3	0-50	0.04	tr			tr	95	5		
	50-100	0.06	tr	tr		5	64	30	tr	Eggs (1)
	100-150	1.0	tr	tr	tr	15	8	75	tr	Annelid
	150-200	0.032	tr		tr	3	95			Pteropod
	0-100	0.05				tr	50	40	tr	Fish larva, eggs
	100-200	0.016			tr	30	70		tr	
	200-300	0.03			tr		95	tr	tr	
	300-400	0.008							tr	
4	0-50	0.04	tr	tr	2	3	88	3	1	Eggs (1)
	50-100	0.032			5	25	50	20	tr	Salpa
	100-150	0.032			20	40	40	tr	tr	
	150-200	0.016							99	Detritus, Salpa
5	0-50	0.06	1			15	65	15	3	Eggs
	50-100	0.04	tr	1	tr	20	73	5	tr	Eggs
	100-150	0.032		tr	25	2	70		tr	
	150-200	0.08		tr	5	3	15	75	tr	
	0-100	0.05	tr	tr	tr	5	90	2	tr	Eggs
	100-200	0.03	tr	tr	tr	30	60		10	
	200-300	0.02		tr	tr	5	70	15	10	Eggs
	300-400	0.008					tr		tr	Detritus

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
6	0-50	0.032	tr	tr		tr	35	60	tr	Unknown
	50-100	0.032	tr		tr	20	50	30	tr	
	100-150	0.032				45	50		5	
	150-200	0.016			1	20	70		5	
	0-100	0.008	tr		tr	10	5		85	
	100-200	0.008	tr		20	10	20		30	Annelid, Siphonophora
	200-300	0.008	tr	tr	1		30	10	60	
	300-400	0.002				tr	tr		tr	
7	0-50	0.008				70	30	tr		
	50-100	> 0					tr		tr	
	100-150	0.02			tr	10	80		10	
	150-200	0.016			tr		90		10	Unknown, eggs
	0-100	0.008				tr	tr	tr		Detritus
	100-200	0.008				60	20	20		
	200-300	0.002			tr		tr			
	300-400	0.002					tr		tr	Annelid
8	0-50	0.04	5			2	65	10	15	Unknown
	50-100	0.032	1			10	60	5	25	Decapod
	100-150	0.032	tr		tr	tr	85		15	Eggs
	150-200	0.008	tr		5		65		30	Eggs
9	0-100	0.06	tr			tr	99	tr	tr	Unknown
	100-200	0.008			5	tr	55		40	Annelid
	200-300	0.04			tr	tr	70	tr	30	Eggs
	0-400	0.005			5	tr	60		35	
10	0-100	0.04	tr	tr	tr	tr	60	40	tr	Annelid
	100-200	0.002			tr		tr		tr	
	100-300	0.016		tr	tr		70		30	Eggs
	200-400	0.008			tr		80		20	
11	0-100	0.02	tr	5	tr	tr	90		tr	Eggs, Annelid
	100-200	0.01	tr				10			Tunicate (90)
	200-300	0.008	5		tr	10	35			Tunicate (50)
	300-400	0.004	5		tr		tr		90	Tunicate

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
12	0-100	0.008	tr	tr			98			
	100-200	0.016			5		15		70	Annelid (10)
	200-300	0.03			2		94		2	
	300-400	0.01			tr		60		40	Pteropod, Annelid
13	0-100	0.016	tr	tr	tr	tr	50	30	20	
	100-200	0.004			5		95		tr	Eggs
	200-300	0.008			tr		70		30	Eggs
	300-400	0.008			tr		90		5	
14	0-100	0.02		tr	tr	tr	60	30	tr	Annelid
	100-200	0.02			5	tr	20		75	
	200-300	0.02			tr		90		10	Annelid
	300-400	0.03			tr	tr	80		15	Eggs, Annelid, Pteropod
15	0-100	0.02	60				40			Eggs
	100-200	0.06				60	5	35		Salpa
	200-300	0.03	tr		tr	tr	75		25	Annelid
	300-400	0.02		tr	tr		40	60	tr	Annelid, eggs
16	0-100	0.016			2	5	85			Annelid (5), Pteropod
	100-200	0.004			tr	20	35		45	
	200-300	0.016			tr	tr	75		25	Annelid, unknown
	300-400	0.01			tr		70		30	Eggs, Annelid
17	0-100	0.01	tr			tr	98	tr	tr	Fish larva, eggs
	100-200	0.004		tr	tr	tr	70		30	Eggs
	200-300	0.02			tr		60	tr	30	Salpa, Annelid (5)
	300-400	0.016			10	tr	40			
18	0-50	0.008		tr	tr	tr	98	tr		Tunicate
	50-100	0.008		tr		tr	98		tr	Annelid, Tunicate
	100-150	0.008			tr	tr	95		5	Annelid, Tunicate
	150-200	0.02				5	95		tr	Tunicate
	0-100	0.03		1		1	97	1	tr	Annelid, Tunicate, eggs
	100-200	.016		tr			98		tr	Tunicate, Annelid
	200-300	.016			tr	10	85		tr	Nauplii, Annelid
	300-400	>0			tr		95		tr	

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
19	0-50	0.008		tr	tr		40		60	Annelid
	50-100	0.002			tr	95	tr			Detritus
	100-150	0.04				tr	5			Annelid (80), Tunicate (15)
	150-200	1.0		tr		15	35	40		Tunicate (5), Annelid (5)
	0-100	0.04				3	40	15		Tunicate (40), Annelid (2)
	100-200	0.016		tr	tr	10		85		Annelid (5), Siphonophora
	200-300	0.02		5	tr		95		tr	
20	0-50	0.016		4		tr	95			Eggs (1), Tunicate
	50-100	0.008			tr	tr	95		5	
	0-100	0.008		tr	tr	tr	97			Eggs (2)
	100-200	0.016					10		90	Siphonophora
	200-300	0.01					50		50	Eggs, Siphonophora
	300-400	0.02			3	10	30	50	5	Detritus
21	0-50	>0					tr			Eggs
	50-100	0.004			tr	tr	tr			Eggs
	100-150	0.004					50		50	
	150-200	0.04					tr	99	tr	Detritus
	0-100	0.02		15	tr	tr	80			Eggs (2), Tunicate (1)
	100-200	0.002					tr		tr	Eggs, Detritus
	200-300	0.05			tr	tr	30	65	5	Tunicate
	300-400	0.03			tr	tr	60		30	Annelid, eggs
22	0-50	0.08	tr			2	90		tr	Annelid (5), Tunicate
	50-100	0.016		tr	tr	tr	99		tr	Siphonophora, eggs
	100-150	0.02		tr	tr		99			Siphonophora, Tunicate
	0-100	0.016	1	tr		tr	99		tr	
	100-200	0.02					55		45	Siphonophora
	200-300	0.02		tr	tr	1	85		12	Annelid, Siphonophora
	300-400	0.01			tr		75		25	Eggs, Annelid
23	0-50	0.032	tr			tr	99			Tunicate (1), eggs
	50-100	0.008					99			Detritus
	100-150	0.008					97		tr	Siphonophora
	150-200	0.06					5	95	tr	Siphonophora
	0-100	0.02		tr			95			Annelid, Detritus (5)
	100-200	0.01					85		15	Eggs
	200-300	0.03			tr		80		20	Eggs, Annelid
	300-400	0.01			tr	tr	tr		tr	

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
24	0-100	0.004					tr			Eggs, Detritus
	100-200	0.004			tr		99		tr	
	200-300	0.02			tr		95		5	Detritus
25	0-100	0.03			tr	tr	85		10	Detritus (5)
	100-200	0.01			tr		tr		tr	Detritus (30), Pteropod
	200-300	0.02			tr		85		5	Detritus (5), eggs
	300-400	0.01		tr	tr		70		25	Detritus (5)
26	0-100	0.02			tr	45	45		10	Annelid
	100-200	0.04				tr	60		40	
	200-300	0.06		tr	tr	tr	95	1	1	Annelid
	300-400	0.04		tr		tr	95	tr	3	Salpa, eggs
27	0-100	0.07		tr	tr	3	80	10	5	Annelid
	100-200	0.03			tr	tr	95		3	
	200-300	0.03			tr	tr	60		40	
	300-400	0.016			tr		90		10	
28	0-100	0.03		tr	tr	1	65	1	30	Annelid
	100-200	0.016			tr	tr	85	10	5	
	200-300	0.02			tr		92		5	Eggs (3)
	300-400	0.016			tr		80		20	Eggs
29	0-100	0.04	tr	tr	tr	tr	98	tr	tr	Annelid (1), Tunicate
	200-300	0.02			tr		98		tr	Eggs (1), Tunicate
	300-400	0.01			tr	tr	99		tr	Tunicate
	0-200	0.07	tr			tr	97	2	1	Tunicate, Annelid
30	0-100	0.03	tr	tr	tr	1	96	2	tr	Annelid
	100-200	0.02				tr	80	15	5	Eggs
	200-300	0.016			tr		98		tr	Eggs (2)
	300-400	0.01			tr	5	80		15	Eggs
31	0-100	0.06				tr	98	1	tr	
	100-200	0.02	tr		tr		90	5	5	Eggs, Siphonophora
	200-300	0.04		tr	tr	tr	60		40	
	300-400	0.02			tr		95		5	Eggs, Annelid

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
32	0-100	1.0	40				50	5	5	Tunicate, Annelid, eggs
	100-200	0.004	tr		tr	60	35		tr	
	200-300	>0	tr		tr		tr		tr	
	300-400	>0	tr				tr			
33	0-100	0.004		tr	tr	tr	98			Tunicate
	100-200	0.01					95		tr	Tunicate
	200-300	0.016			2	tr	68		30	
	300-400	0.004			tr		50		50	
34	0-100	0.02	1	tr		4	95			Tunicate
	100-200	0.002			tr		95			
	200-300	0.02					tr		60	Tunicate (30), Annelid (10)
	300-400	0.016			5	tr	70		25	
35	0-100	0.03		tr		tr	98			Tunicate, eggs
	100-200	0.004			tr		80		20	Siphonophora
	200-300	0.04		tr	tr	tr	70		30	Annelid
	300-400	0.03			tr		98		tr	Mysiid
36	0-100	0.03		tr		tr	90	1	tr	Annelid, Siphonophora Tunicate, Decapod
	100-200	0.01			tr	20	70		tr	Annelid (10), Tunicate
	200-300	0.016			tr		95		5	Annelid
	300-400	0.02		tr	tr	tr	95		tr	Eggs, Annelid
37	0-100	0.05		3		tr	85	5	3	Tunicate
	100-200	0.03		tr		tr	10			Tunicate (90)
	200-300	0.02			tr	tr	30	20	50	Siphonophora, Annelid
	300-400	0.02			5		60		10	Annelid (25), Tunicate
38	0-100	0.04				30	40	10	5	Tunicate, Decapod (5), Mysiid (5)
	100-200	0.004			tr		35		65	
	200-300	0.02			10		55		35	Unknown
	300-400	0.01			tr		70		30	Unknown
39	0-100	0.07	tr			tr	98		2	Decapod, Mysiid
	100-200	0.04			tr		60		25	Annelid (15), Decapod
	200-300	0.016		tr	tr	tr	80		20	
	300-400	0.02			tr	tr	60	25	15	Annelid

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
40	0-100	0.008	tr			tr	98	tr	tr	Decapod, Siphonophora
	100-200	0.01		tr	tr		35		5	Annelid (40), Tunicate (20)
	200-300	0.03		tr	tr	25	55		10	Tunicate (10)
	300-400	0.03		tr	10	10	77		3	Annelid
41	0-100	0.03	tr			50	20		tr	Annelid (30), eggs
	100-200	0.008			tr		60		40	
	100-300	0.016			tr		65		30	Siphonophora, Tunicate
	200-400	0.008			tr		99		tr	Eggs, Annelid
42	0-100	0.02	tr	tr		tr	95		3	Annelid, Tunicate
	100-200	0.008			tr		80		20	Annelid, Siphonophora
	200-300	0.02			tr		80		20	Annelid, Tunicate
	300-400	0.016			5	5	80		10	
43	0-100	0.05	tr	tr		10	80		10	Decapod
	100-200	0.008	tr				99		tr	Annelid
	200-300	0.02			tr		60		40	
	300-400	0.016			tr		10	85	5	
44	0-100	0.03		tr	tr	tr	40	55	tr	Annelid, Siphonophora, Fish larva, Tunicate
	100-200	0.01				tr	98		tr	Annelid
	200-300	0.016					95		5	Siphonophora
	300-400	0.016			tr		90		10	
45	0-100	0.02		tr		tr	98	tr	tr	Detritus
	100-200	0.004				20	40	tr	40	Annelid
	200-300	0.02			tr		98		tr	Annelid
	300-400	0.02			tr		99		tr	Annelid
46	0-100	0.06	2	tr	tr	1	95	tr	1	Tunicate, Siphonophora
	100-200	0.01			tr	tr	40	tr	60	Siphonophora
	200-300	0.03			tr		95		5	
	300-400	0.03			tr	tr	98		tr	Unknown
47	0-100	0.02		tr	tr	tr	95	tr	tr	
	100-200	0.01					90		10	
	200-300	0.02		tr	tr	tr	95		5	Unknown
	300-400	0.02			tr	tr	90		10	

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
48	0-100	0.05		tr		5	85	5	5	Annelid, Siphonophora
	100-200	0.02			tr	tr	98		tr	Siphonophora
	200-300	0.016			tr		70		30	Siphonophora
	300-400	0.01			tr	tr	70		30	
49	0-100	0.06				2	85	10	3	Tunicate
	100-200	0.03			tr	5	80		15	Siphonophora, Annelid
	200-300	0.016			tr		70		30	Siphonophora, Annelid
	300-400	0.01			5		90		5	
50	0-100	0.04		tr			70	30	tr	
	100-200	0.02				10	65	5	20	Annelid, Siphonophora
	200-300	0.01			tr		35		60	Annelid (5)
	300-400	0.016			tr		99		tr	
51	0-100	0.06				5	75	20	tr	Annelid
	100-200	0.04			tr	tr	96		4	Siphonophora
	200-300	0.002					tr		tr	
	300-400	0.01			tr	2	95		3	Annelid
52	0-100	0.02		tr		5	95	tr	tr	Tunicate
	100-200	0.016			tr	15	75	tr	10	Tunicate, Siphonophora
	200-300	0.03			tr	tr	90	tr	10	Siphonophora
	300-400	0.04			tr	tr	99		tr	Annelid
53	0-100	0.07	5	tr	1	10	70	1	tr	Tunicate, eggs, Annelid (10)
	100-200	0.01		20	5	5	40		10	Annelid (20)
	100-300	0.01			tr	10	40		50	Siphonophora, Annelid
	200-400	0.02		tr	5	5	80		10	Siphonophora
54	0-100	0.02	3	tr	tr	20	60		20	
	100-200	0.04	tr		2		3	95	tr	Siphonophora
	200-300	0.016		tr	tr		90		10	Tunicate, Siphonophora
	300-400	0.02			tr	tr	80		20	Annelid, Tunicate
55	0-100	0.01		tr	tr	tr	98		tr	Decapod
	100-200	0.016		tr			60		40	Tunicate, Siphonophora
	200-300	0.03		tr	tr	10	70	20	tr	Annelid
	300-400	0.03			20	2	15	60	3	Tunicate, Annelid

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
56	0-100	0.02				tr	98		tr	Eggs
	100-200	0.008		tr	tr	40	50	10	tr	Siphonophora
	200-300	0.05		tr	tr	5	75	tr	20	Siphonophora
	300-400	0.08			5	tr	85		10	Annelid
57	0-100	0.03		tr	tr	tr	60	30	5	Annelid (5), Tunicate
	100-200	0.004			tr	tr	tr		80	Annelid, Siphonophora
	200-300	0.03			tr	tr	95		5	
	300-400	0.02			tr		99		tr	Annelid
58	0-100	0.02		tr	tr		95	tr	tr	Annelid, Tunicate Siphonophora
	100-200	0.004			tr	tr	60	40	tr	Siphonophora
	200-300	0.03			tr	tr	95		5	Siphonophora
	300-400	0.05			tr	tr	70	20	10	Annelid
59	0-100	0.03		tr	tr	tr	80		10	Tunicate, eggs, Annelid (10)
	100-200	0.016			5		5		90	Siphonophora
	200-300	0.02			tr		70		30	Annelid, Tunicate
	300-400	0.01			tr		70	tr	30	Annelid, Tunicate
60	0-100	0.06		tr		5	60	20	15	Annelid
	100-200	0.01		tr	tr	60	30	tr	10	Tunicate, Annelid
	200-300	0.03			tr	tr	10	50	40	Annelid
	300-400	0.06			tr	1	96		3	
61	0-100	0.04			tr		98	tr	2	Annelid
	100-200	0.01		tr	tr	tr	95		3	Squid, Siphonophora
	200-300	0.03			tr		95		5	Annelid
	300-400	0.03			tr		99		tr	
62	0-100	0.05		tr	tr	tr	98	tr	tr	Annelid
	100-200	0.01		5	tr		65		25	Fish larva
	200-300	0.016			tr		95		5	Detritus
	300-400	0.04			tr		70	30	tr	
63	0-100	0.004		tr		tr	tr		tr	Pteropod, Detritus
	100-200	0.02					75	5	20	Siphonophora
	200-300	0.01			tr	tr	70		30	
	300-400	0.02				tr	99		tr	

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
64	0-100	0.02		tr			35	60	5	Annelid
	100-200	0.01			tr		50	40	10	Salpa
	200-300	0.008				5	90		tr	Annelid (5)
	300-400	0.02		tr	tr	tr	95		5	
65	0-100	0.02		tr	tr	5	75		20	Siphonophora
	100-200	0.01				tr	80	tr	20	Siphonophora
	200-300	0.016		tr		tr	70	10	20	
	300-400	0.02			tr		80	20	tr	Annelid
66	0-100	0.004		tr			70	10	20	Annelid
	100-200	0.01		tr			90		10	Eggs, Tunicate
	200-300	0.01				tr	80	tr	20	Siphonophora, eggs, Tunicate
	300-400	0.02					95		5	
67	0-100	0.03		tr		tr	60	40	tr	Fish larva
	100-200	0.01			tr		5		95	Annelid
	200-300	0.004					99			Eggs, Annelid, Siphonophora
	300-400	0.03			tr		98		tr	Siphonophora
68	0-100	0.01		tr		30	60	tr	10	Salpa, Pteropod, Annelid
	100-200	0.03			tr	2	95	tr	2	Siphonophora, Annelid
	200-300	0.02				tr	40	10	50	Annelid, Tunicate, eggs
	300-400	0.03			tr		35	60	5	Eggs
69	0-100	0.02		tr	tr	1	97		2	
	100-200	0.004	tr				80		20	Eggs
	200-300	0.01					tr		99	Eggs
	300-400	0.03				tr	60	40	tr	Detritus
70	0-100	0.03	tr	tr	tr		98	tr	tr	Siphonophora
	100-200	0.016	tr	10			50		15	Annelid (25)
	200-300	0.03		tr	tr		95			Eggs (5)
	300-400	0.016		tr	tr	20	80		tr	
71	0-100	0.04		tr		5	90	3	tr	Siphonophora
	100-200	0.01			tr		98		tr	Annelid, Siphonophora
	200-300	0.004			tr		95		tr	Eggs
	300-400	0.03					90	5	5	Eggs

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
72	0-100	0.03		tr	2	tr	90	3	5	Decapod
	100-200	0.01					70		10	Annelid (20), eggs
	200-300	0.016			tr		70	25	tr	Eggs (3)
	300-400	0.02				40	50	10	tr	
73	0-100	0.05	tr	tr		tr	80	15	5	Decapod, Annelid
	100-200	0.004		tr	tr		90		10	Annelid
	200-300	0.03		5	tr	tr	60	15	20	Annelid
	300-400	0.03		tr	tr		95	tr	5	Annelid
74	0-100	0.04		tr		tr	98		tr	Detritus
	100-200	0.016		tr			75	20	5	Eggs, Annelid
	200-300	0.01			tr		50	40	10	Unknown
	300-400	0.03			tr		99		tr	
75	0-100	0.02	5	tr		15	55		25	Annelid, Decapod
	100-200	0.01			tr		98		tr	Annelid
	200-300	0.004					60	tr	40	
	300-400	0.03			tr		99	tr	tr	
76	0-100	0.04	tr	tr	tr	tr	20	60	15	Decapod, Annelid
	100-200	0.016		tr	tr		75	15	5	Annelid, Detritus (5)
	200-300	0.01		tr		10	70		20	
	300-400	0.04					99		tr	
77	0-100	0.04	30				60		10	
	100-200	0.016	tr	tr	tr		85		15	
	200-300	0.004					98		tr	Eggs, Annelid
	300-400	0.016			tr		90	5	5	Detritus
78	0-100	0.02	5			tr	65		30	
	100-200	0.02		tr	tr		95		5	Annelid
	200-300	0.004			tr		99		tr	
	300-400	0.03					50	40	10	
79	0-100	0.04	30			5	25	20	20	Eggs
	100-200	0.02					5	85	10	Detritus
	200-300	0.004					50		50	
	300-400	>0					tr		tr	

Table B-9, continued

Station Number	Depth interval (m)	Volume (cc/m^3)	Phytoplankton	Gastropoda	Ostracoda	Amphipoda	Copepoda	Euphausiacea	Chaetognatha	Miscellaneous
80	0-100	0.016	1			tr	3		95	
	100-200	0.016		tr	tr	40	40		20	Siphonophora
	200-300	0.01					30		70	Detritus
	300-400	0.013	2			5	30	30	30	Annelid
81	0-100	0.03	5			tr	45	10	tr	Decapod (40), Tunicate
	100-200	0.016	1		tr		tr	95	4	
	200-300	0.016					45	30	20	Eggs (5)
	300-400	0.01					95		5	
82	0-100	0.02				60	30	10	tr	Salpa, Annelid
	100-200	0.004			tr	tr	tr	95	tr	Annelid
	200-300	0.01			tr		5	95	tr	
	300-400	0.002					tr			
83	0-100	0.016					tr		95	Unknown (5), Annelid
	100-200	0.02			tr	3	2	90	5	
	200-300	0.01				tr	5		95	
	300-400	0.01					95		tr	Detritus
84	0-100	0.01	tr			5	85		10	Tunicate, Annelid
	100-200	0.004			tr	40	10	50	tr	Eggs
	200-300	0.01				tr	10		5	Unknown (85)
	300-400	0.004					70		30	Detritus
85	0-100	0.02	5			tr	3		2	Decapod (90)
	100-200	0.01			tr	5	95		tr	Annelid
	200-300	0.016			tr		tr		98	Fish larva, eggs
	300-400	0.01			5		90		5	Detritus

TABLE B-10. Number of fish larvae and eggs taken with Maruchi net at Kagoshima Maru and Keiten Maru stations.

Station	Net contents
Ka 520	None
Ka 521	Oxyporhamphus, 3; Exocoetus volitans, 2; Prognichthys seali, 3
Ka 522	Myctophidae, 8; Exocoetus volitans, 1; Prognichthys seali, 2; Balistidae, 1 (Canthidermis?)
Ka 523	None
Ka 524	Carangidae, 2 (Seriolinae); Exocoetus monocirrhus, 1
Ka 525	Exocoetus volitans, 1; Cypselurus, 1
Ka 526	Oxyporhamphus, 1; Exocoetus volitans, 1; Exocoetidae, 1 (broken)
Ka 527	Myctophidae, 19 (3 spp); Egg, 2 (Apodes?)
Ka 528	Myctophidae, 6; Exocoetus volitans, 1; Exocoetus monocirrhus, 1
Ka 529	Gonostomatidae ?, 1; Balistidae, 1 (Canthidermis?)
Ka 530	Myctophidae, 8; Coryphaena equiselis, 4; Tholichthys larva, 1 (Chaetodontidae?)
Ka 531	Myctophidae, 2; Exocoetus volitans, 3; Exocoetus monocirrhus, 2; Coryphaena equiselis, 1; Mullidae, 5; Balistidae, 2 (Canthidermis)
Ka 532	Exocoetus volitans, 2; Exocoetus monocirrhus, 4; Hirundichthys, 1; Tholichthys larva, 1 (Chaetodontidae?)
Ka 533	Myctophidae, 29 (2 spp); Exocoetus volitans, 1
Ka 534	Myctophidae, 19 (2 spp); Exocoetus volitans, 1
Ke 555	Myctophidae, 3; Gonostomidae, 1; Muraenidae, 1; Katsuwonus, 1; Coryphaena, 1; Lutjanidae, 1; (indistinct, 2)
Ke 556	Myctophidae, 10; Paraexocoetus, 1; Coryphaena, 1; Balistidae, 1; Diodon, 4; Leptocephalus larva, 2 (Congridae?)
Ke 560	Myctophidae, 21, Paraexocoetus, 1; Exocoetus, 6; Cypselurus, 1
Ke 563	Myctophidae, 13; Exocoetidae, 2 (Prognichthys); Holocentridae, 4; Carangidae, 1; (indistinct, 1)
Ke 564	Myctophidae, 2; Gonostomidae, 1 (Diplophos); Holocentridae, 1; Pomacentridae, 1 (Abudeduf); (indistinct, 2)
Ke 568	None
Ke 569	Myctophidae, 7; Eleptorhamphus, 1; Cypselurus, 1; Gonostomidae, 1; (Diplophos); Holocentridae, 1; Katsuwonidae, 4 (Katsuwonus, Auxis); Istiophoridae, 1 (Istiophorus); Carangidae, 10 (2 spp); Pomacentridae, 1; Monacanthidae, 1 (Osbeckia); Bothidae, 1 (Bothinae); Leptocephalus larva, 3 (Congridae); (indistinct, 3 (2 spp))
Ke 575	Engraulis, 1; Trachynocephalus, 1; Hirundichthys, 1; Coryphaena, 3; Mullidae, 3; Therapon, 2; Scorpaenidae, 1 (Minous); Gadidae, 1 (Physiculus?); Bregmaceros, 1; Heterosomata, 1; Tylosurus, 1; (indistinct, 1)
Ke 576	Spratelloides, 1; Myctophidae, 2; Synodontidae, 4 (Trachynocephalus, 1 sp); Coryphaena, 4; Mullidae, 1; Apogonidae, 1; Hepatus, 1
Ke 577	Engraulis, 3; Scorpaenidae, 1 (Minous); Coryphaena, 1; Leptocephalus larva, 1 (Congridae?); (indistinct, 2 (1 sp)); Eggs of Hirundichthys, numerous

TABLE B-11. Zooplankton constituents taken with Kitahara net (200–0 m) at Keiten Maru stations.

Station	Ke541	Ke543	Ke544	Ke545	Ke546	Ke547	Ke548	Ke549	Ke550	Ke553
No. of zooplankton (per $10^{-2}m^3$)	13.8	2.3	18.4	8.3	19.3	18.0	8.3	25.0	7.5	11.8
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100
Foraminifera	4	rr	2	rr	rr	rr	rr	-	rr	-
Radiolaria	5	10	4	rr	7	2	6	4	6	4
Tintinnoinea	2	rr	5	rr	3	9	7	2	rr	1
Siphonophorae	-	-	rr	-	-	-	-	-	-	-
Medusae	-	rr	10	3	4	7	7	-	-	2
Chaetognatha	1	8	10	3	4	7	7	6	2	3
Rotatoria	-	-	-	rr	1	rr	-	rr	3	1
Polychaeta larvae	-	rr	rr	rr	1	rr	1	rr	1	-
Pteropoda	rr	rr	-	rr	2	rr	rr	2	rr	-
Other Mollusca	-	-	rr	rr	rr	-	rr	-	rr	-
Ostracoda	1	-	rr	rr	2	rr	1	rr	4	-
Amphipoda	-	rr	-	-	rr	rr	rr	1	3	-
Copepoda (large)	11	35	30	19	42	32	23	25	31	31
Copepoda (small)	58	39	28	35	28	38	42	47	33	47
Nauplius larvae	3	1	2	5	2	rr	3	2	2	3
Other Crustacea	6	-	2	14	1	5	2	1	8	2
Thaliacea	rr	rr	rr	2	rr	1	rr	rr	2	rr
Appendicularia	9	7	7	20	8	6	8	10	5	5
Pelagic eggs	-	rr	rr	-	-	-	rr	rr	-	rr
Pluteus larvae	rr	-	rr	-	-	rr	rr	rr	-	rr

Station	Ke558	Ke560	Ke561	Ke562	Ke563	Ke564	Ke565	Ke566	Ke567	Ke568
No. of zooplankton (per $10^{-2}m^3$)	9.5	7.6	15.6	6.4	8.3	7.5	6.2	9.0	8.7	9.0
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100
Foraminifera	-	-	1	2	-	-	-	-	-	rr
Radiolaria	2	-	2	-	1	rr	rr	2	1	-
Tintinnoinea	-	-	1	-	-	1	-	rr	-	-
Siphonophorae	rr	-	rr	-	-	-	-	-	-	-
Medusae	-	-	-	rr	-	-	-	-	-	-
Chaetognatha	9	6	4	5	4	2	1	3	3	12
Rotatoria	-	-	-	-	-	-	rr	-	-	rr
Polychaeta larvae	-	rr	1	-	-	-	-	-	rr	-
Pteropoda	-	-	rr	1	rr	-	-	-	-	-
Other Mollusca	-	-	rr	-	rr	-	-	-	-	-
Ostracoda	2	4	3	-	1	rr	1	-	4	-
Amphipoda	-	-	-	-	rr	-	-	-	-	-
Copepoda (large)	34	74	29	40	55	13	33	21	29	26
Copepoda (small)	43	13	51	39	31	77	60	66	52	59
Nauplius larvae	rr	1	rr	1	2	4	1	5	5	-
Other Crustacea	-	-	1	rr	rr	-	-	-	-	-
Thaliacea	1	-	-	rr	1	-	-	rr	rr	-
Appendicularia	8	1	4	9	2	-	1	1	3	-
Pelagic eggs	rr	-	rr	-	-	-	-	-	rr	-
Pluteus larvae	-	-	-	-	-	-	-	-	-	-

Table B-11, continued

Station	Ke569	Ke570	Ke571	Ke572	Ke573	Ke574	Ke575	Ke576	Ke577	Ke578
No. of zooplankton (per $10^{-2}m^3$)	13.4	19.6	7.3	8.7	8.0	7.4	5.5	4.3	7.4	4.2
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100
Foraminifera	-	1	-	rr	-	-	-	-	-	-
Radiolaria	3	2	-	3	-	2	1	1	2	5
Tintinnoinea	1	-	rr	rr	-	-	rr	rr	-	rr
Siphonophorae	-	-	-	-	-	-	-	-	-	-
Medusae	-	1	-	-	-	-	rr	-	-	-
Chaetognatha	-	1	11	-	8	11	2	4	16	3
Rotatoria	-	-	-	-	rr	-	rr	-	-	-
Polychaeta larvae	1	rr	-	-	-	-	rr	-	rr	rr
Pteropoda	-	-	1	-	-	-	-	rr	-	-
Other Mollusca	-	-	-	rr	-	-	1	-	rr	rr
Ostracoda	-	-	-	-	-	2	-	rr	-	-
Amphipoda	rr	-	-	-	-	-	-	-	-	-
Copepoda (large)	39	32	40	13	33	72	87	44	41	41
Copepoda (small)	48	56	45	60	51	15	7	40	30	46
Nauplius larvae	2	-	rr	rr	4	rr	1	8	2	3
Other Crustacea	-	-	-	-	-	-	-	-	-	-
Thaliacea	-	-	-	-	-	-	-	-	-	-
Appendicularia	3	4	-	21	-	-	-	-	-	-
Pelagic eggs	-	-	-	rr	-	-	-	-	-	-
Pluteus larvae	-	-	-	-	-	-	-	-	-	-

rr: very rare.

TABLE B-12. Zooplankton constituents taken with Kitahara net (100–0 m) at Kagoshima Maru stations.

Station	Ka520	Ka521	Ka522	Ka523	Ka524	Ka525	Ka526	Ka527	Ka528	Ka529	Ka530	Ka531	Ka532	Ka533
No. of zooplankton (per $10^{-2}m^3$)	7.6	1.7	20.8	7.5	8.2	2.6	5.5	4.4	19.0	6.5	8.4	23.0	9.4	1.4
Zooplankton (per cent)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Foraminifera	rr	-	-	-	rr	-	-	-	-	-	-	rr	-	-
Radiolaria	2	-	3	-	-	rr	rr	-	rr	-	-	rr	-	-
Tintinnoinea	1	3	1	-	-	2	4	-	1	1	-	rr	rr	-
Siphonophorae	-	-	-	-	rr	-	-	-	-	-	-	rr	-	rr
Medusae	-	-	-	rr	-	-	1	-	-	-	-	rr	rr	-
Chaetognatha	3	-	4	2	1	8	4	3	9	2	2	3	-	10
Rotatoria	-	-	-	-	-	1	-	-	-	-	-	2	1	-
Polychaeta larvae	-	-	rr	-	-	-	rr	-	-	-	-	rr	rr	-
Pteropoda	2	2	rr	-	-	-	-	-	rr	1	-	1	-	rr
Other Mollusca	1	-	rr	-	rr	-	-	-	-	-	rr	rr	-	-
Ostracoda	2	-	-	-	-	-	-	-	rr	-	rr	rr	rr	-
Amphipoda	-	-	rr	-	rr	-	-	rr	rr	-	rr	-	-	rr
Copepoda (large)	25	41	28	46	29	36	47	51	48	29	21	32	20	2
Copepoda (small)	51	43	49	50	65	50	42	40	39	61	73	57	75	87
Nauplius larvae	3	rr	6	rr	rr	2	-	rr	1	-	rr	1	2	rr
Other Crustacea	1	-	3	-	-	-	-	-	-	-	rr	-	rr	-
Thaliacea	-	-	-	-	rr	-	-	-	-	-	rr	-	-	-
Appendicularia	6	10	4	-	2	-	1	3	2	5	3	2	3	-
Pelagic eggs	-	-	-	rr	-	rr	-	-	-	rr	-	1	-	-
Pluteus larvae	-	-	-	-	-	-	-	-	-	-	-	rr	-	-

rr: very rare.

TABLE C-1. Phytoplankton (including Dinoflagellata) from Marutoku net hauls (150–0 m) at Satsuma stations.

Station	1	2	3	4	5	6	7	8	9	10	11
PHYTOPLANKTON											
Percentage of total phytoplankton	100	100	100	100	100	100	100	100	100	100	100
Hemiaulus haucki	6.0	66.7									
Pyrocystis pseudonocutiluca	59.0	27.5	90.5	80.3	88.0	90.2	85.6	90.0	93.8	87.0	72.8
P. lunula	17.0	0.8						5.0		1.1	
P. fusiformis	14.0	1.1	1.4	1.6		5.9	2.5	2.5	1.2	3.3	
Ceratium spp	4.0	3.9	8.1	18.1	12.0	3.9	11.9	2.5	5.0	8.6	27.2

	12	13	14	15	16	17	18	19	21	22	23
Percentage of total phytoplankton	100	100	100	100	100	100	100	100	100	100	100
Hemiaulus haucki							96.2	99.9			
Pyrocystis pseudonocutiluca	83.9	57.8	67.3	85.9	85.2	77.9	1.3	+	68.6	74.4	50.9
P. lunula							0.1				
P. fusiformis		1.4	3.8			1.3				2.6	1.7
Ceratium spp	16.1	40.8	28.9	14.1	14.8	20.8	2.4	+	31.4	23.0	47.4

	24	25	26	27	28	29	30	31	33	34	35
Percentage of total phytoplankton	100	100	100	100	100	100	100	100	100	100	100
Hemiaulus haucki			99.1	99.9	99.8						
Pyrocystis pseudonocutiluca	46.7	35.7	0.5	+	0.1	71.0	64.9	90.3	78.7	77.8	50.8
P. lunula											
P. fusiformis	0.7		0.1	+	+	6.5	5.4	6.5		7.4	20.0
Ceratium spp	46.6	64.3	0.3	+	+	22.5	29.7	3.2	21.3	14.8	29.2

+: Less than one per cent

TABLE C-2. Dinoflagellates obtained with Kitahara net at Kagoshima Maru stations (100-0 m) and at Keiten Maru stations (200-0 m).

Station	Ka520	Ka521	Ka522	Ka523	Ka524	Ka525	Ka526	Ka527	Ka528	Ka529	Ka530	Ka531	Ka532	Ka533
No. of dinoflagellata (per 10^{-2} m^3)	3.5	8.7	4.5	8.2	1.4	5.7	2.9	1.6	2.5	8.4	6.0	15.0	2.6	1.1
Dinoflagellata (per cent)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Amphisolenia	rr	-	-	rr	-	rr	-	rr	rr	rr	rr	1	rr	rr
Ornithocercus	2	1	1	rr	-	3	-	-	-	rr	-	-	-	-
Dinophysis	rr	-	rr	rr	rr	1	rr	-	rr	-	-	rr	-	-
Pyrocystis	4	2	rr	18	2	1	8	33	13	12	rr	2	10	4
Ceratium	92	96	94	81	97	94	91	65	82	96	98	93	89	93
Peridinium	-	-	rr	-	-	-	-	-	2	-	-	2	-	-
Other Dinoflagellata	1	rr	rr	rr	rr	rr	-	rr	2	rr	rr	rr	rr	rr

Station	Ke541	Ke543	Ke544	Ke545	Ke546	Ke547	Ke548	Ke549	Ke550	Ke553
No. of dinoflagellata (per 10^{-2} m^3)	7.0	9.5	2.0	5.4	8.0	1.5	4.5	0.3	1.9	0.4
Dinoflagellata (per cent)	100	100	100	100	100	100	100	100	100	100
Amphisolenia	2	rr	1	rr	2	rr	rr	2	rr	rr
Ornithocercus	1	rr	rr	rr	rr	1	rr	2	1	rr
Dinophysis	2	rr	rr	rr	1	rr	rr	rr	rr	-
Pyrocystis	8	15	6	12	2	rr	4	12	8	2
Ceratium	81	78	90	70	89	94	91	76	74	91
Peridinium	rr	rr	rr	2	rr	rr	1	rr	1	4
Other Dinoflagellata	4	6	2	15	5	4	3	7	5	1

Station	Ke558	Ke560	Ke561	Ke562	Ke563	Ke564	Ke565	Ke566	Ke567	Ke568
No. of dinoflagellata (per 10^{-2} m^3)	5.9	8.7	0.7	5.2	4.2	1.6	2.5	3.6	8.2	5.5
Dinoflagellata (per cent)	100	100	100	100	100	100	100	100	100	100
Amphisolenia	rr	-	1	-	rr	-	2	-	-	-
Ornithocercus	-	rr	-	rr	-	rr	-	-	2	-
Dinophysis	rr	-	rr	-	-	-	-	-	4	-
Pyrocystis	4	8	2	12	11	2	4	17	-	13
Ceratium	89	90	94	86	86	97	94	81	91	85
Peridinium	-	-	1	-	1	-	rr	1	rr	rr
Other Dinoflagellata	6	-	-	-	1	-	-	-	2	-

Station	Ke569	Ke570	Ke571	Ke572	Ke573	Ke574	Ke575	Ke576	Ke577	Ke578
No. of dinoflagellata (per 10^{-2} m^3)	7.0	6.2	1.8	0.6	0.8	0.2	1.2	0.8	1.3	4.8
Dinoflagellata (per cent)	100	100	100	100	100	100	100	100	100	100
Amphisolenia	1	-	-	-	-	rr	-	rr	-	-
Ornithocercus	2	-	-	rr	2	1	-	rr	-	-
Dinophysis	-	-	-	-	-	-	-	-	-	-
Pyrocystis	10	42	24	-	22	5	-	8	-	10
Ceratium	86	57	74	92	75	88	100	90	99	89
Peridinium	-	-	-	-	-	3	-	-	-	-
Other Dinoflagellata	-	-	-	6	-	5	-	1	-	-

rr: very rare

TABLE C-3a. Phytoplankton obtained with Kitahara net (100-0 m) at Kagoshima Maru stations.

Station	Ka520	Ka521	Ka522	Ka523	Ka524	Ka525	Ka526
No. of phytoplankton (per 10^{-2} L)	6.3	1.3	10.1	9.6	6.8	7.0	4.8
Phytoplankton (per cent)	100	100	100	100	100	100	100
Melosiraceae	-	-	-	-	-	-	-
Stephanopyxis	-	-	-	-	-	-	-
Thalassiosira spp	-	-	-	-	-	-	-
Coscinodiscus spp	2	-	3	14	36	1	-
Planktoniella sol	32	-	26	rr	rr	-	-
Asterolampra marylandica	-	-	-	-	-	-	-
Ethomodiscus gazellae	-	-	-	-	-	-	-
Corethron criophylum	-	1	rr	-	rr	-	-
Lauderia borealis	-	rr	rr	-	-	-	-
Leptocylindulus danicus	rr	-	rr	-	-	1	3
Rhizosolenia (total)	32	38	28	25	21	81	46
R. alata f. indica	+	+	r	r	+	c	+
R. robusta	-	-	-	-	rr	-	-
R. castracanei	+	-	-	-	-	c	-
R. acuminata	rr	-	-	rr	-	-	-
R. stolterforthi	rr	-	rr	-	-	+	-
R. setigera	-	-	-	-	-	rr	-
R. imbricata	-	rr	-	rr	rr	-	-
R. calcar avis	r	rr	-	+	-	+	+
R. styliformis v. latissima	r	-	r	c	-	c	-
R. sp	-	-	-	-	rr	-	-
Chaetoceros (total)	17	60	39	48	37	10	45
C. coarctatus	+	c	+	c	+	+	+
C. pervianus	rr	-	-	rr	-	-	rr
C. affinis	-	-	-	-	-	rr	-
C. decipiens	-	rr	-	rr	r	rr	-
C. neapolitanus	-	-	-	-	rr	-	-
C. curvisetus	+	-	+	rr	rr	rr	-
C. didymus	+	+	rr	-	rr	-	+
C. laciniosus	rr	+	+	+	-	-	rr
C. lorenzianus	r	r	-	-	r	r	-
C. compressus	-	-	-	-	rr	-	-
C. spp	-	-	r	-	-	-	-
Climacodium (total)	+	+	+	2	-	+	+
C. frauenfeldi	+	rr	-	+	-	rr	rr
C. biconcavum	-	-	-	rr	-	-	-
Strepthotheca thamensis	1	-	rr	-	2	-	-
Ditylum brightwelli	rr	4	-	-	-	rr	rr
Biddulphia spp	3	-	-	2	1	-	-
Hemiaulus (total)	4	1	-	1	-	-	-
H. haucki	+	+	-	+	-	-	-
H. sp	r	r	-	rr	-	-	-
Triceratium spp	-	-	-	rr	-	-	-
Thalassionema nitzschioides	-	rr	2	-	-	8	-
Thalassiothrix (total)	4	8	-	4	+	2	-
T. frauenfeldi	+	r	-	+	rr	r	-
T. longissima	c	rr	-	+	-	rr	-
Nitzschia seriata	-	-	-	-	rr	-	-
Katagnymene sp	-	-	rr	-	-	-	-
Trichodesmium (total)	4	3	1	3	+	6	-
T. erythraeum	rr	-	-	+	-	-	-
T. thiebauti	+	+	+	-	rr	-	-
T. contortum	rr	rr	rr	-	-	+	-
T. sp	-	-	-	+	-	-	-

Table C-3a, continued

Station	Ka527	Ka528	Ka529	Ka530	Ka531	Ka532	Ka533
No. of phytoplankton (per 10^{-2} L)	4.1	6.5	8.2	13.0	7.5	8.9	1.1
Phytoplankton (per cent)	100	100	100	100	100	100	100
Melosiraceae	-	-	-	rr	-	-	-
Stephanopyxis	-	2	8	1	4	1	rr
Thalassiosira spp	-	-	-	-	-	-	-
Coscinodiscus spp	11	-	12	2	7	2	2
Planktoniella sol	2	4	-	-	2	-	-
Asterolampra marylandica	rr	-	rr	4	-	-	-
Ethomodiscus gazellae	rr	rr	-	rr	-	rr	-
Corethron criphylum	-	-	rr	-	-	1	1
Lauderia borealis	rr	-	rr	-	-	-	-
Leptocylindulus danicus	-	-	-	rr	rr	-	rr
Rhizosolenia (total)	40	12	48	8	29	22	42
R. alata f. indica	-	rr	+	c	rr	rr	+
R. robusta	-	-	-	rr	-	rr	-
R. castracanei	-	r	-	-	r	r	rr
R. acuminata	rr	rr	-	-	-	rr	-
R. stolterforthi	+	rr	-	+	-	r	+
R. setigera	-	-	-	-	rr	-	-
R. imbricata	-	-	-	-	rr	-	-
R. calcar avis	+	-	rr	r	r	rr	+
R. styliformis v. latissima	+	-	rr	-	cc	-	-
R. sp	-	rr	-	-	-	rr	-
Chaetoceros (total)	34	56	11	13	50	14	19
C. coarctatus	r	-	rr	-	rr	+	-
C. pervianus	-	-	rr	rr	rr	rr	rr
C. affinis	-	+	r	rr	+	-	rr
C. decipiens	rr	rr	rr	-	-	rr	rr
C. neapolitanus	-	-	rr	-	rr	rr	rr
C. curvisetus	rr	-	rr	rr	rr	rr	-
C. didymus	-	+	rr	+	+	-	+
C. laciniosus	rr	rr	+	-	+	+	+
C. lorenzianus	r	-	rr	-	-	rr	-
C. compressus	-	-	rr	-	rr	-	rr
C. spp	-	r	-	-	+	-	-
Climacodium (total)	1	+	-	1	-	2	+
C. frauenfeldi	r	rr	-	r	-	r	rr
C. biconcavum	-	rr	-	-	-	c	-
Strepthotheca thamensis	-	-	4	rr	rr	2	rr
Ditylum brightwelli	-	rr	-	10	-	rr	-
Biddulphia spp	1	-	5	-	-	2	rr
Hemiaulus (total)	8	-	7	-	-	1	2
H. haucki	r	-	+	-	-	rr	r
H. sp	rr	-	r	-	-	-	-
Triceratium spp	rr	-	rr	-	rr	-	rr
Thalassionema nitzschioides	-	-	-	2	-	1	rr
Thalassiothrix (total)	-	13	-	40	6	46	12
T. frauenfeldi	-	c	-	cc	+	cc	c
T. longissima	-	+	-	rr	rr	+	r
Nitzschia seriata	-	-	-	rr	-	rr	rr
Katagnymene sp	rr	-	-	rr	rr	-	-
Trichodesmium (total)	2	12	3	17	+	6	14
T. erythraeum	+	-	-	rr	rr	-	-
T. thiebauti	-	c	+	c	-	c	rr
T. contortum	+	+	+	r	-	-	rr
T. sp	-	+	-	-	-	-	-

+: present
c: common
cc: very common
r: rare
rr: very rare

TABLE C-3b. Phytoplankton obtained with Kitahara net (200-0 m) at Keiten Maru stations.

Station	Ke541	Ke543	Ke544	Ke545	Ke546	Ke547
No. of phytoplankton (per 10^{-2} L)	7.0	2.9	12.1	7.2	3.5	1.3
Phytoplankton (per cent)	100	100	100	100	100	100
Melosiraceae	-	2	-	-	-	4
Stephanopyxis	-	rr	3	2	rr	rr
Thalassiosira spp	-	-	-	2 col.	rr	-
Coscinodiscus spp	3	7	2	1	6	14
Planktoniella sol	2	2	4	4	5	3
Asterolampra marylandica	-	rr	rr	rr	2	rr
Ethomodiscus gazellae	-	rr	-	rr	-	-
Corethron criophylum	-	rr	rr	rr	rr	rr
Lauderia borealis	-	-	-	1	-	-
Leptocylindulus danicus	-	rr	2	-	rr	rr
Rhizosolenia (total)	28	22	21	45	48	22
R. alata f. indica	c	+	+	-	-	+
R. robusta	-	+	rr	+	r	rr
R. castracanei	+	+	rr	-	rr	r
R. acuminata	-	-	+	rr	+	+
R. stolterforthi	-	-	-	rr	-	-
R. setigera	-	-	-	-	-	-
R. imbricata	r	-	+	-	-	-
R. calcar avis	r	r	-	-	r	r
R. styliformis v. latissima	c	c	c	c	+	rr
R. sp	-	-	-	rr	-	-
Chaetoceros (total)	10	5	19	24	10	24
C. coarctatus	-	-	-	-	+	rr
C. pervianus	rr	-	rr	rr	r	rr
C. affinis	-	-	rr	+	r	r
C. decipiens	rr	+	r	r	rr	rr
C. neapolitanus	-	rr	-	-	-	-
C. curvisetus	-	rr	rr	r	+	+
C. didymus	rr	rr	r	+	+	+
C. laciniosus	+	+	rr	rr	-	-
C. lorenzianus	-	-	rr	-	-	rr
C. compressus	-	-	-	+	-	-
C. spp	-	-	-	rr	-	-
Climacodium (total)	13	11	+	4	-	10
C. frauenfeldi	c	c	rr	+	-	c
C. biconcavum	-	-	-	-	-	rr
Strepthotheca thamensis	rr	2	3	rr	6	11
Ditylum brightwelli	rr	rr	rr	1	4	rr
Biddulphia spp	rr	rr	1	3	rr	2
Hemiaulus (total)	4	1	2	4	+	+
H. haucki	+	+	rr	rr	rr	rr
H. sp	rr	rr	r	+	-	-
Triceratium spp	-	rr	-	rr	2	-
Thalassionema nitzschioides	rr	3	rr	5	rr	1
Thalassiothrix (total)	8	3	12	2	3	2
T. frauenfeldi	+	r	c	+	r	r
T. longissima	c	rr	+	-	-	rr
Nitzschia seriata	1	1	2	1	-	rr
Iatagnymene sp	rr	rr	rr	rr	rr	rr
Trichodesmium (total)	( )	( )	( )	( )	( )	( )
T. erythraeum	-	+	r	-	rr	-
T. thiebauti	c	-	c	-	+	+
T. contortum	cc	c	-	r	+	rr
T. sp	rr	cc	-	-	-	rr

Table C-3b, continued

Station	Ke548	Ke549	Ke550	Ke553	Ke558	Ke560
No. of phytoplankton (per 10^{-2} L)	15.0	8.7	2.5	6.6	9.8	4.4
Phytoplankton (per cent)	100	100	100	100	100	100
Melosiraceae	-	-	rr	-	-	-
Stephanopyxis	3	6	rr	-	-	-
Thalassiosira spp	-	-	-	-	-	-
Coscinodiscus spp	4	7	4	4	-	-
Planktoniella sol	17	2	5	-	-	-
Asterolampra marylandica	rr	1	4	-	-	4
Ethomodiscus gazellae	rr	rr	-	-	-	-
Corethron criophylum	-	-	-	-	-	-
Lauderia borealis	1	-	-	-	-	-
Leptocylindulus danicus	1	1	rr	-	-	-
Rhizosolenia (total)	14	17	38	16	11	21
R. alata f. indica	c	c	c	+	rr	rr
R. robusta	r	rr	rr	rr	rr	rr
R. castracanei	r	+	-	-	-	rr
R. acuminata	rr	-	-	rr	rr	-
R. stolterforthi	rr	-	rr	-	-	rr
R. setigera	rr	-	rr	-	-	-
R. imbricata	-	r	rr	-	rr	-
R. calcar avis	-	rr	rr	rr	-	rr
R. styliformis v. latissima	rr	-	+	-	-	+
R. sp	rr	-	-	-	-	-
Chaetoceros (total)	22	9	36	19	45	11
C. coarctatus	-	-	rr	rr	rr	-
C. pervianus	r	rr	-	r	r	r
C. affinis	+	rr	rr	+	-	+
C. decipiens	+	+	+	rr	rr	rr
C. neapolitanus	rr	rr	rr	-	rr	-
C. curvisetus	+	r	c	-	r	-
C. didymus	+	r	+	-	-	+
C. laciniosus	+	+	rr	rr	r	+
C. lorenzianus	-	rr	-	rr	rr	-
C. compressus	+	rr	rr	-	-	rr
C. spp	rr	-	-	-	-	-
Climacodium (total)	+	2	+	12	1	4
C. frauenfeldi	rr	r	rr	c	r	+
C. biconcavum	-	-	rr	+	rr	rr
Strepthotheca thamensis	2	rr	rr	6	-	2
Ditylum brightwelli	2	3	-	-	-	-
Biddulphia spp	1	rr	2	-	-	2
Hemiaulus (total)	7	+	+	-	-	-
H. haucki	rr	rr	rr	-	-	-
H. sp	+	-	rr	-	-	-
Triceratium spp	2	-	-	-	-	-
Thalassionema nitzschioides	2	4	rr	-	-	1
Thalassiothrix (total)	14	1	2	14	-	+
T. frauenfeldi	c	rr	r	cc	-	rr
T. longissima	rr	-	-	+	-	-
Nitzschia seriata	rr	-	-	27	36	42
Katagnymene sp	-	-	-	-	-	-
Trichodesmium (total)	( )	( )	( )	-	6	12
T. erythraeum	rr	rr	+	-	-	-
T. thiebauti	+	c	+	-	+	-
T. contortum	r	cc	+	-	c	c
T. sp	-	-	-	-	rr	-

Table C-3b, continued

Station	Ke561	Ke562	Ke563	Ke564	Ke565	Ke566
No. of phytoplankton (per 10^{-2} L)	21.0	7.5	12.1	7.6	6.5	8.3
Phytoplankton (per cent)	100	100	100	100	100	100
Melosiraceae	-	-	rr	-	-	-
Stephanopyxis	-	-	-	-	-	-
Thalassiosira spp	-	-	-	-	-	-
Coscinodiscus spp	4	2	-	1	1	1
Planktoniella sol	-	-	-	-	-	-
Asterolampra marylandica	-	3	rr	-	rr	-
Ethomodiscus gazellae	-	-	-	-	-	2
Corethron criophylum	-	-	-	-	-	-
Lauderia borealis	-	-	rr	-	-	rr
Leptocylindulus danicus	-	-	-	-	-	-
Rhizosolenia (total)	78	61	23	33	8	15
R. alata f. indica	+	-	rr	-	-	c
R. robusta	-	-	-	-	rr	-
R. castracanei	-	rr	-	-	-	-
R. acuminata	-	rr	-	-	-	-
R. stolterforthi	-	+	+	rr	-	-
R. setigera	-	-	rr	-	-	-
R. imbricata	r	-	-	+	-	rr
R. calcar avis	-	-	rr	-	r	-
R. styliformis v. latissima	+	+	r	r	-	+
R. sp	-	-	rr	-	-	-
Chaetoceros (total)	9	13	17	22	47	69
C. coarctatus	-	rr	r	-	r	-
C. pervianus	-	-	rr	-	-	r
C. affinis	-	rr	-	-	rr	+
C. decipiens	-	-	-	rr	-	rr
C. neapolitanus	-	-	-	-	-	-
C. curvisetus	r	+	-	+	-	-
C. didymus	-	r	-	r	-	r
C. laciniosus	r	+	rr	rr	c	rr
C. lorenzianus	-	-	rr	-	-	-
C. compressus	-	-	rr	-	-	-
C. spp	rr	-	-	-	rr	c
Climacodium (total)	5	+	16	-	8	-
C. frauenfeldi	+	-	rr	-	+	-
C. biconcavum	+	rr	c	-	+	-
Strepthotheca thamensis	-	1	3	2	4	-
Ditylum brightwelli	-	-	rr	-	-	rr
Biddulphia spp	rr	-	rr	-	-	3
Hemiaulus (total)	-	+	-	+	-	-
H. haucki	-	-	-	rr	-	-
H. sp	-	rr	-	-	-	-
Triceratium spp	-	rr	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	3	-
Thalassiothrix (total)	+	-	32	41	7	-
T. frauenfeldi	rr	-	cc	cc	c	-
T. longissima	-	-	rr	+	+	-
Nitzschia seriata	-	-	8	-	-	-
Katagnymene sp	-	-	-	-	-	rr
Trichodesmium (total)	2	18	-	-	21	8
T. erythraeum	-	-	-	-	-	-
T. thiebauti	rr	-	-	-	c	+
T. contortum	r	c	-	-	cc	c
T. sp	-	-	-	-	-	-

Table C-3b, continued

Station	Ke567	Ke568	Ke569	Ke570	Ke571	Ke572
No. of phytoplankton (per 10^{-2} L)	3.2	4.0	13.6	3.8	8.4	2.0
Phytoplankton (per cent)	100	100	100	100	100	100
Melosiraceae	-	-	rr	-	-	-
Stephanopyxis	-	-	-	-	-	-
Thalassiosira spp	-	-	-	-	-	-
Coscinodiscus spp	3	2	rr	rr	-	4
Planktoniella sol	14	1	-	3	3	-
Asterolampra marylandica	-	1	-	1	1	rr
Ethomodiscus gazellae	-	-	-	rr	-	-
Corethron criphylum	rr	-	-	-	rr	-
Lauderia borealis	-	-	-	-	-	1
Leptocylindulus dnaicus	-	rr	-	-	3	rr
Rhizosolenia (total)	32	27	24	6	20	23
R. alata f. indica	-	rr	-	-	rr	rr
R. robusta	-	+	+	-	-	-
R. castracanei	-	-	rr	rr	r	-
R. acuminata	rr	-	rr	-	-	-
R. stolterforthi	-	-	-	+	-	-
R. setigera	-	-	-	rr	-	-
R. imbricata	-	-	-	-	-	-
R. calcar avis	+	-	+	rr	-	-
R. styliformis v. latissima	+	-	+	+	-	-
R. sp	-	-	-	-	rr	-
Chaetoceros (total)	12	5	25	50	56	36
C. coarctatus	r	-	+	-	+	-
C. pervianus	-	-	-	-	rr	-
C. affinis	-	+	-	rr	c	+
C. decipiens	-	-	rr	-	-	rr
C. neapolitanus	-	-	-	-	-	rr
C. curvisetus	-	+	-	+	r	-
C. didymus	r	-	+	+	-	-
C. laciniosus	-	r	r	r	-	r
C. lorenzianus	-	rr	-	-	-	-
C. compressus	rr	-	-	-	-	-
C. spp	-	-	rr	-	r	r
Climacodium (total)	3	4	32	12	+	8
C. frauenfeldi	r	r	cc	c	rr	c
C. biconcavum	+	rr	r	r	-	rr
Strepthotheca thamensis	2	-	3	-	-	1
Ditylum brightwelli	-	-	-	rr	rr	-
Biddulphia spp	-	-	rr	-	4	-
Hemiaulus (total)	+	+	+	+	+	-
H. haucki	rr	rr	-	-	rr	-
H. sp	-	rr	rr	rr	rr	-
Triceratium spp	-	rr	-	-	rr	-
Thalassionema nitzschioides	2	-	-	rr	-	1
Thalassiothrix (total)	5	10	1	8	-	3
T. frauenfeldi	c	+	r	+	-	+
T. longissima	rr	c	rr	rr	-	+
Nitzschia seriata	-	-	-	-	-	-
Katagnymene sp	-	rr	-	-	rr	-
Trichodesmium (total)	40	35	12	18	11	44
T. erythraeum	-	-	rr	-	rr	-
T. thiebauti	+	+	+	c	+	+
T. contortum	c	cc	+	+	-	c
T. sp	-	-	-	rr	-	-

Table C-3b, continued

KEITEN MARU: PHYTOPLANKTON DATA (Cont.)

Station	Ke573	Ke574	Ke575	Ke576	Ke577	Ke578
No of phytoplankton (per 10^{-2} L)	8.0	1.7	3.4	6.5	8.5	4.2
Phytoplankton (per cent)	100	100	100	100	100	100
Melosiraceae	-	-	-	-	-	-
Stephanopyxis	rr	-	-	2	1	-
Thalassiosira spp	-	-	-	-	-	-
Coscinodiscus spp	-	2	-	-	1	-
Planktoniella sol	-	-	-	4	-	-
Asterolampra marylandica	-	2	rr	12	1	11
Ethomodiscus gazellae	-	-	-	-	-	-
Corethron criophylum	-	rr	1	1	-	rr
Lauderia borealis	-	-	-	1	-	rr
Leptocylindulus danicus	rr	3	rr	3	rr	2
Rhizosolenia (total)	11	3	20	18	28	8
R. alata f. indica	rr	-	-	-	rr	+
R. robusta	-	rr	-	-	rr	-
R. castracanei	-	-	-	-	-	-
R. acuminata	-	-	rr	rr	rr	rr
R. stolterforthi	+	-	r	rr	-	rr
R. setigera	-	-	-	-	-	-
R. imbricata	rr	-	-	rr	-	-
R. calcar avis	-	+	-	rr	+	rr
R. styliformis v. latissima	r	-	r	r	+	-
R. sp	rr	-	-	-	-	-
Chaetoceros (total)	87	19	44	24	19	31
C. coarctatus	-	-	rr	-	r	r
C. pervianus	rr	-	-	r	-	rr
C. affinis	c	c	rr	c	rr	rr
C. decipiens	-	rr	-	rr	-	rr
C. neapolitanus	-	-	rr	-	-	-
C. curvisetus	-	+	-	-	r	r
C. didymus	+	+	-	c	+	+
C. laciniosus	-	r	r	+	r	r
C. lorenzianus	rr	rr	-	-	rr	rr
C. compressus	-	rr	rr	-	rr	-
C. spp	-	-	r	+	r	-
Climacodium (total)	-	+	-	8	2	4
C. frauenfeldi	-	rr	-	c	+	c
C. biconcavum	-	-	-	rr	-	rr
Strepthotheca thamensis	-	-	2	3	rr	1
Ditylum brightwelli	-	-	rr	-	-	-
Biddulphia spp	-	rr	-	2	rr	2
Hemiaulus (total)	+	+	+	-	+	+
H. haucki	rr	rr	-	-	-	rr
H. sp	rr	-	rr	-	rr	rr
Triceratium spp	-	-	rr	rr	rr	rr
Thalassionema nitzschioides	rr	4	3	2	-	8
Thalassiothrix (total)	-	4	2	16	8	12
T. frauenfeldi	-	+	+	c	c	+
T. longissima	-	+	+	+	+	c
Nitzschia seriata	rr	-	-	-	-	-
Katagnymene sp	-	rr	-	-	-	-
Trichodesmium (total)	1	61	27	3	37	19
T. erythraeum	rr	-	rr	-	rr	-
T. thiebauti	-	rr	c	r	c	c
T. contortum	-	cc	+	-	cc	+
T. sp	-	rr	-	-	rr	-

+: present
c: common
cc: very common
r: rare
rr: very rare
( ): % not recorded

TABLE C-4a. More abundant diatoms by per cent taken in surface water samples (330 ml) at Satsuma stations. a)

Station	1	2	3	4	5	6	7	8	9	10	11	12	13
Latitude (N)	33°02'	32°04'	31°56'	31°58'	32°00'	31°58'	32°00'	32°00'	32°02'	31°31'	29°30'	27°27'	25°13'
Longitude (E)	141°54'	142°53'	144°44'	148°26'	153°00'	157°31'	162°00'	165°38°	168°45'	170°59'	175°00'	171°47'	167°06'
Date (August 1955)	3	3	4	5	6	7	9	10	11	11	13	14	15
Time (GCT)	0800	1715	0830	0930	1745	2340	0730	0830	0200	1830	0000	1200	2200
No. of total plankton/liter b)	33(0)	71(1)	27(0)	27(0)	6(0)	9(0)	40(0)	46(1)	12(0)	17(0)	18(0)	66(1)	21(1)
No. of Diatoms/liter b)	0	9(0)	21(0)	12(0)	1(0)	4(0)	35(0)	45(1)	6(0)	10(0)	14(0)	65(1)	20(1)
No. of misc. plankton/liter b)	33(0)	70(1)	6(0)	15(0)	5(0)	5(0)	5(0)	11(0)	6(0)	7(0)	4(0)	9(0)	9(0)
Diatoms (per cent)	–	100	100	100	100	100	100	100	100	100	100	100	100
Chaetoceros (total)	–	–	14	75	–	25	11	2.0	–	50	21	1.0	–
Subgenus Phaeoceros (total)	–	–	14	75	–	25	–	2.0	–	50	21	1.0	–
C. dadayi	–	–	–	75	–	–	–	1.0	–	50	–	–	–
C. pendulus	–	–	14	–	–	25	–	0.0	–	–	21	0.0	–
C. peruvianus	–	–	–	–	–	–	–	–	–	–	–	–	–
C. tetrastichon	–	–	–	–	–	–	–	–	–	–	–	1.0	–
Subgenus Hyalochaete (total)	–	–	–	–	–	–	11	–	–	–	–	–	–
C. lorenzianus	–	–	–	–	–	–	11	–	–	–	–	–	–
C. spp (Hyalochaete)	–	–	–	–	–	–	–	–	–	–	–	–	–
Dactyliosolen tenuis	–	–	–	–	–	–	–	–	–	–	–	–	–
Hemiaulus haucki	–	–	–	–	–	–	6.0	63	–	–	–	94	97
Nitzschia seriata	–	–	–	–	–	–	–	–	–	–	–	–	–
Rhizosolenia (total)	–	100	71	25	100	50	54	34	100	30	43	4.0	2.0
R. calcar avis	–	–	–	–	100	–	–	1.0	–	–	–	0.0	–
R. castracanei	–	–	–	17	–	–	–	–	–	–	–	–	–
R. cylindrus	–	–	–	–	–	–	6.0	–	–	–	–	–	–
R. shrubsolei	–	–	–	–	–	–	9.0	–	–	–	–	–	–
R. styliformis	–	–	14	8.0	–	50	29	33	100	30	43	4.0	2.0
R. styl. v. latissima	–	100	57	–	–	–	11	–	–	–	–	–	–
Thalassionema nitzschioides	–	–	–	–	–	–	17	–	–	–	–	–	–
Thalassiothrix longissima	–	–	–	–	–	–	9.0	–	–	–	–	–	–
Pseudoeunotia sp	–	–	–	–	–	–	–	–	–	–	–	–	–
Pennatae (misc.)	–	–	14	–	–	25	3.0	0.0	–	20	36	1.0	2.0

a) Identified by R. Marumo.

b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

Table C-4a, continued

Station	14	15	16	17	18	19	20	21	22	23	24	25
Latitude (N)	25°08'	25°12'	25°00'	24°55'	25°01'	25°05'	28°00'	30°08'	31°04'	32°00'	33°03'	33°57'
Longitude (E)	162°20'	157°30'	153°20'	148°45'	145°30'	143°28'	142°30'	141°46'	141°15'	140°50'	140°22'	140°45'
Date (August 1955)	17	18	19	20	21	22	23	23	24	24	24	25
Time (GCT)	0230	1030	1730	2345	1830	0815	0800	2330	0700	1400	2100	0400
No. of total plankton/liter	48(0)	22(0)	20(0)	65(0)	51(0)	13(1)	16(0)	15(1)	15(0)	42(0)	21(0)	99(0)
No. of Diatoms/liter	24(0)	16(0)	10(0)	0	45(0)	83(0)	9(0)	24(0)	9(0)	33(0)	9(0)	75(0)
No. of misc. plankton/liter	24(0)	6(0)	10(0)	65(0)	6(0)	49(0)	7(0)	13(1)	6(0)	9(0)	12(0)	24(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100	100	100
Chaetoceros (total)	33	75	-	-	-	90	78	100	100	64	100	16
Subgenus Phaeoceros (total)	33	75	-	-	-	2.0	78	100	100	27	-	8.0
C. dadayi	33	56	-	-	-	2.0	78	100	100	27	-	-
C. pendulus	-	-	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	19	-	-	-	-	-	-	-	-	-	-
C. tetrastichon	-	-	-	-	-	-	-	-	-	-	-	8.0
Subgenus Hyalochaete (total)	-	-	-	-	-	7.0	-	-	-	36	100	8.0
C. lorenzianus	-	-	-	-	-	4.0	-	-	-	36	100	-
C. spp (Hyalcohaete)	-	-	-	-	-	4.0	-	-	-	-	-	8.0
Dactyliosolen tenuis	25	-	-	-	-	-	-	-	-	-	-	-
Hemiaulus haucki	21	6.0	-	-	-	-	-	-	-	-	-	-
Nitzschia seriata	-	-	-	-	-	-	-	-	-	-	-	24
Rhizosolenia (total)	13	19	80	-	-	2.0	11	-	-	-	-	4.0
R. calcar avis	-	-	10	-	-	1.0	-	-	-	-	-	-
R. castracanei	-	-	-	-	-	-	-	-	-	-	-	-
R. cylindrus	-	-	-	-	-	-	-	-	-	-	-	-
R. shrubsolei	-	-	-	-	-	-	-	-	-	-	-	-
R. styliformis	4.0	19	30	-	-	1.0	-	-	-	-	-	-
R. styl. v. latissima	8.0	-	40	-	-	-	11	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-	36	-	20
Thalassiothrix longissima	-	-	-	-	-	2.0	11	-	-	-	-	28
Pseudoeunotia sp	-	-	-	-	100	81	-	-	-	-	-	-
Pennatae (misc.)	8.0	-	20	-	-	-	-	-	-	-	-	-

TABLE C-4b. Less abundant diatoms (less than 5% at any station) taken in surface water samples (330 ml) at Satsuma stations.

PLANKTON DIATOMS	
Chaetoceros pseudocurvisetus	19
Climacodium biconcavum	19
C. frauenfeldianum	8
Rhizosolenia alata	25
Planktoniella sol	19, 25
MISCELLANEOUS PLANKTON	
Amphisolenia bidentata	14, 25
Ceratium carriense	13, 20
C. furca	2, 14, 20, 21, 25
C. inflexum	22, 25
C. macroceros	14
C. massiliense	2
C. pentagonum	7, 12, 14, 18
C. trichoceros	14, 25
Ceratocorys herrida	19, 21
Ornithocercus serratus	21
Pyrophachus holorogicum	13, 24
Dictyocha fibula	21-23
Globigerina bulloides	13
Pyrocystis pseudonoctiluca	2, 5, 19
Rhabdonella spiralis	14
Rhabdonellopsis apophysata	15
Steenstrupiella steenstrupii	14, 17, 19
Copepoda except nauplius	4, 5, 9, 10, 13-15, 17, 19, 20
Copepoda nauplius	6, 8, 9, 11, 12, 14-17, 20, 23-25
Trichodesmium spp	1-4, 6, 7, 8, 10, 13-17, 19, 21, 24, 25

TABLE C-5a. More abundant diatoms by per cent taken in surface water samples (200 ml) at Shumpu Maru (NMO) stations.[a]

Station	A1	A3	A5	A7	A8	A9	A11	C3	C5	C7
Latitude (N)	31°50'	31°50'	31°54'	31°52'	31°54'	31°54'	31°55'	31°00'	31°00'	31°00'
Longitude (E)	129°38'	128°52'	128°05'	127°18'	126°44'	126°09'	125°00'	129°45'	129°00'	128°14'
Date (July 1955)	28	28	27	27	27	27	27	25	25	26
Time (GCT)	1136	0510	2344	1924	1531	1145	0454	1324	1937	0111
Depth (m)	0	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter[b]	43(1)	28(1)	10(2)	52(2)	63(2)	41(2)	64(2)	35(1)	28(1)	48(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterolampra sp	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	-	3.5	-	-	-	-	-
B. elongatum	-	-	-	-	-	-	-	-	-	-
B. minus	21	13	20	-	-	-	2.4	-	-	-
B. varians	-	-	-	-	-	-	4.5	-	11	13
Cerataulina compacta	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	44	38	73	87	82	93	76	20	19	60
Subgenus Phaeoceros (total)	-	13	57	68	62	82	69	-	-	29
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	-	-	-	-	-	-	-	-	-
C. pseudodichaeta	-	7.3	57	68	62	82	68	-	-	26
C. tetrastichon	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	44	25	16	19	20	11	6.7	20	19	31
C. affinis	-	-	-	-	6.2	-	-	-	-	-
C. compressus	21	-	-	2.9	-	-	1.9	-	4.3	-
C. costatus	-	-	-	-	-	-	1.1	-	-	-
C. didymus	-	22	-	2.5	-	-	-	-	15	-
C. distans	-	-	-	-	2.1	-	-	-	-	-
C. lauderi	-	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	3.6	-	1.2	-	0.9	-	20	-	-
C. messanensis	-	-	-	-	-	-	0.9	-	-	31
C. pelagicus	-	-	-	7.7	6.2	4.8	2.8	-	-	-
C. subsecundus	23	-	-	-	-	-	-	-	-	-
C. tortissimus	-	-	-	-	-	-	-	-	-	-
C. sp	-	-	16	-	4.5	-	-	-	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	13	-	-	-	-	1.3	-	6.4	-
Corethron histrix	-	-	-	-	-	-	0.2	-	-	-
Coscinodiscus sp	-	1.8	2.7	-	-	-	0.2	4.0	6.4	-

a) Identified by S. Fukasi.

b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

Table C-5a, continued

Station	A1	A3	A5	A7	A8	A9	A11	C3	C5	C7
Diatoma hyalinum	-	-	-	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	-	1.6	-	-	-	30	-
Fragilaria sp	-	-	-	-	1.2	-	-	-	-	-
Hemiaulus haucki	-	-	-	-	-	-	0.4	-	-	-
H. membranacea	-	15	-	-	-	-	-	-	-	-
Lauderia borealis	-	-	-	-	-	1.9	-	-	-	-
Navicula sp	8.3	1.8	1.3	0.4	0.2	-	-	16	6.4	1.2
Nitzschia pungens var. atlantica	-	-	-	-	-	-	-	-	-	-
N. seriata	-	-	-	0.6	-	1.6	-	-	-	6.2
Rhizosolenia (total)	19	13	-	1.7	4.1	1.9	3.0	48	6.4	19
R. alata	-	-	-	-	-	-	0.4	-	-	-
R. bergoni	-	-	-	-	-	-	0.2	-	-	-
R. calcar avis	2.1	-	-	-	-	-	-	28	-	7.5
R. fragilissima	-	-	-	-	-	-	-	-	-	-
R. hebetata f. semispina	15	1.8	-	0.2	0.6	-	-	12	4.3	7.5
R. imbricata	-	9.1	-	-	-	-	-	-	2.1	-
R. stolterfothi	-	-	-	1.3	2.1	1.9	2.4	-	-	-
R. styliformis	-	1.8	-	-	-	-	-	8.0	-	-
Schroderella delicatula	-	-	-	-	-	-	-	-	-	-
Skeletomema costatum	-	-	-	2.9	3.1	1.6	5.6	-	-	-
Thalassiosira rotula	-	-	-	-	-	-	0.7	-	-	-
Thalassionema nitzschioides	-	-	-	-	0.4	-	1.3	4.0	11	3.7
Thalassiothrix frauenfeldi	4.2	-	-	1.0	0.6	-	-	-	-	-
T. longissima	-	-	-	0.2	-	-	-	-	-	-

Table C-5a, continued

Station	C8	C9	C11	C13	D1	D3	E1	E3	E5	E7
Latitude (N)	31°00'	31°00'	31°00'	31°00'	31°00'	30°40'	30°12'	29°42'	29°15'	28°47'
Longitude (E)	127°51'	127°17'	126°09'	125°00'	130°33'	130°33'	130°34'	131°06'	131°37'	132°08'
Date (July 1955)	26	26	26	26	9	9	10	10	10	11
Time (GCT)	0355	0817	1600	2250	1140	1557	1017	1602	2311	0705
Depth (m)	0	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter	14(2)	22(2)	32(2)	98(1)	13(2)	78(0)	28(1)	28(1)	75(0)	99(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterolampra sp	-	-	-	-	-	-	2.1	2.2	20	-
Bacteriastrum delicatulum	-	6.1	-	-	2.3	-	-	-	-	-
B. elongatum	-	-	-	-	-	-	-	-	-	-
B. minus	-	-	-	-	-	-	-	-	-	-
B. varians	1.9	-	-	-	-	-	13	-	-	-
Cerataulina compacta	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	63	90	45	35	36	-	62	74	20	1.5
Subgenus Phaeoceros (total)	43	60	19	35	4.7	-	55	37	20	1.5
C. coarctatus	-	-	-	-	3.1	-	4.2	-	-	-
C. peruvianus	-	-	-	1.3	0.8	-	8.5	4.3	-	-
C. pseudodichaeta	43	60	19	33	-	-	-	33	-	-
C. tetrastichon	-	-	-	-	-	-	43	-	20	1.5
Subgenus Hyalochaete (total)	20	29	26	-	31	-	6.4	37	-	-
C. affinis	-	14	-	-	7.8	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	-	-
C. costatus	5.2	-	-	-	-	-	-	-	-	-
C. didymus	-	-	-	-	5.5	-	-	22	-	-
C. distans	7.7	-	-	-	-	-	6.4	-	-	-
C. lauderi	-	-	-	-	-	-	-	-	-	-
C. lorenzianus	3.2	1.1	-	-	16	-	-	-	-	-
C. messanensis	3.9	-	-	-	-	-	-	-	-	-
C. pelagicus	-	2.8	3.7	-	-	-	-	-	-	-
C. subsecundus	-	-	-	-	-	-	-	-	-	-
C. tortissimus	-	-	22	-	-	-	-	-	-	-
C. sp	-	-	-	-	-	-	-	15	-	-
C. spp	-	8.3	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	-	3.0	-	-	-	-	-	-	-
Corethron histrix	-	-	-	-	-	7.7	-	-	-	-
Coscinodiscus sp	-	-	7.5	1.3	2.3	7.7	-	-	-	1.5

Table C-5a, continued

Station	C8	C9	C11	C13	D1	D3	E1	E3	E5	E7
Diatoma hyalinum	-	-	-	1.3	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	-	-	-	-	-	-	86
Fragilaria sp	-	-	-	-	-	7.7	15	2.2	13	0.5
Hemiaulus haucki	-	-	-	-	-	-	-	-	-	5.1
H. membranacea	-	-	-	-	-	-	-	-	-	-
Lauderia borealis	3.2	-	-	11	-	-	-	-	-	-
Navicula sp	0.6	-	-	-	-	7.7	4.2	-	13	0.5
Nitzschia pungens var. atlantica	-	-	-	-	-	-	-	-	-	-
N. seriata	16	2.2	-	2.7	-	-	-	-	-	2.5
Rhizosolenia (total)	3.2	-	2.2	16	40	69	4.2	20	33	1.0
R. alata	-	-	-	-	-	-	2.1	2.2	-	-
R. bergoni	-	-	-	-	-	-	-	-	-	0.5
R. calcar avis	-	-	-	-	-	-	-	-	-	-
R. fragilissima	-	-	-	-	7.8	15	-	-	-	-
R. hebetata f. semispina	-	-	-	2.7	11	7.7	-	15	6.7	0.5
R. imbricata	-	-	-	2.7	3.9	-	2.1	-	27	-
R. stolterfothi	3.2	-	2.2	11	16	39	-	-	-	-
R. styliformis	-	-	-	-	1.6	7.7	-	-	-	-
Schroderella delicatula	-	-	-	12	-	-	-	-	-	-
Skeletomema costatum	-	-	39	-	-	-	-	-	-	-
Thalassiosira rotula	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	3.9	1.1	-	11	17	-	-	-	-	-
Thalassiothrix frauenfeldi	-	-	-	-	-	-	-	-	-	1.0
T. longissima	-	-	-	-	-	-	-	-	-	-

Table C-5a, continued

Station	E11	G2	G4	G6	G8	G10	G12	H1	I1	I3
Latitude (N)	27°50'	27°17	27°41'	28°05'	28°30'	28°54'	29°18	30°05'	28°30	28°54'
Longitude (E)	133°10'	128°05'	127°28'	126°51'	126°14'	125°38'	125°00'	126°08'	129°22'	128°47'
Date (July 1955)	11	16	16	16	17	17	17	18	19	19
Time (GCT)	2155	0855	1527	2250	0526	1100	1646	0233	1345	0728
Depth (m)	0	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter	45(0)	11(1)	60(0)	13(1)	18(1)	22(1)	47(1)	42(2)	17(1)	71(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterolampra sp	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	-	-	-	-	-	-	-
B. elongatum	-	-	-	-	-	-	-	-	29	-
B. minus	-	-	-	-	-	-	-	-	-	-
B. varians	-	-	-	-	-	-	-	-	-	-
Cerataulina compacta	-	-	-	-	-	-	-	14	-	-
Chaetoceros (total)	-	9.5	-	-	53	21	5.3	2.4	11	0.8
Subgenus Phaeoceros (total)	-	-	-	-	-	-	-	1.7	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	-	-	-	-	-	-	-	-	-
C. pseudodichaeta	-	-	-	-	-	-	-	-	-	-
C. tetrastichon	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	9.5	-	-	53	21	5.3	0.7	11	0.8
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	-	-
C. costatus	-	-	-	-	-	-	-	-	-	-
C. didymus	-	-	-	-	-	-	5.3	-	11	-
C. distans	-	-	-	-	-	-	-	-	-	-
C. lauderi	-	-	-	-	53	-	-	-	-	-
C. lorenzianus	-	9.5	-	-	-	19	-	0.7	-	0.8
C. messanensis	-	-	-	-	-	-	-	-	-	-
C. pelagicus	-	-	-	-	-	-	-	-	-	-
C. subsecundus	-	-	-	-	-	-	-	-	-	-
C. tortissimus	-	-	-	-	-	-	-	-	-	-
C. sp	-	-	-	-	-	2.3	-	-	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-	-
Corethron histrix	-	-	-	-	-	-	-	-	-	-
Coscinodiscus sp	-	-	-	-	11	2.3	2.1	0.2	18	2.5

Table C-5a, continued

Station	E11	G2	G4	G6	G8	G10	G12	H1	I1	I3
Diatoma hyalinum	-	-	33	-	-	-	-	13	-	-
Eucampia zoodiacus	-	-	-	-	-	-	-	-	11	-
Fragilaria sp	-	-	-	-	2.8	-	-	-	-	-
Hemiaulus haucki	11	-	-	-	-	-	-	-	-	-
H. membranacea	-	-	-	-	-	70	5.3	-	-	-
Lauderia borealis	-	-	-	-	-	-	-	-	-	-
Navicula sp	-	-	17	23	19	-	11	0.2	3.6	-
Nitzschia pungens var. atlantica	-	-	-	7.8	-	-	6.4	-	-	-
N. seriata	-	-	-	12	-	-	7.4	26	-	-
Rhizosolenia (total)	89	91	25	23	14	4.6	14	0.7	25	97
R. alata	-	-	-	3.8	2.8	-	2.1	-	11	-
R. bergoni	-	-	-	-	-	-	1.1	-	-	-
R. calcar avis	-	-	-	-	-	-	6.4	-	-	-
R. fragilissima	-	-	-	-	-	-	-	-	-	-
R. hebetata f. semispina	11	-	17	19	5.6	2.3	3.2	0.5	7.1	0.8
R. imbricata	78	91	8.3	-	5.6	-	1.1	-	3.6	93
R. stolterfothi	-	-	-	-	-	2.3	-	-	-	-
R. styliformis	-	-	-	-	-	-	-	0.2	-	2.5
Schroderella delicatula	-	-	-	-	-	-	-	-	-	-
Skeletomema costatum	-	-	-	-	-	-	-	-	-	-
Thalassiosira rotula	-	-	-	-	-	-	-	38	-	-
Thalassionema nitzschioides	-	-	8.3	23	-	-	40	-	-	-
Thalassiothrix frauenfeldi	-	-	-	3.8	-	2.3	8.5	0.9	-	-
T. longissima	-	-	17	7.6	-	-	-	-	-	-

Table C-5a, continued

Station	I5	I7	I8	J1	J3	J5	J7
Latitude (N)	29°17'	29°45'	30°03'	30°18'	39°51'	29°21'	28°55'
Longitude (E)	128°09'	127°25'	126°57'	130°19'	130°07'	129°55'	129°43'
Date (July 1955)	18	18	18	23	23	22	22
Time (GCT)	2146	1351	0947	0449	2330	1812	1320
Depth (m)	0	0	0	0	0	0	0
No. of Diatoms/liter	28(1)	48(0)	24(0)	72(0)	36(0)	31(1)	16(1)
Diatoms (per cent)	100	100	100	100	100	100	100
Asterolampra sp	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	25	-	-	-	-
B. elongatum	-	-	-	-	-	-	-
B. minus	-	-	-	-	-	-	-
B. varians	-	-	-	-	-	-	-
Cerataulina compacta	-	-	-	-	-	-	-
Chaetoceros (total)	-	25	-	-	-	5.8	-
Subgenus Phaeoceros (total)	-	25	-	-	-	-	-
C. coarctatus	-	25	-	-	-	-	-
C. peruvianus	-	-	-	-	-	-	-
C. pseudodichaeta	-	-	-	-	-	-	-
C. tetrastichon	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	-	-	-	-	5.8	-
C. affinis	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-
C. costatus	-	-	-	-	-	-	-
C. didymus	-	-	-	-	-	-	-
C. distans	-	-	-	-	-	-	-
C. lauderi	-	-	-	-	-	-	-
C. lorenzianus	-	-	-	-	-	5.8	-
C. messanensis	-	-	-	-	-	-	-
C. pelagicus	-	-	-	-	-	-	-
C. subsecundus	-	-	-	-	-	-	-
C. tortissimus	-	-	-	-	-	-	-
C. sp	-	-	-	-	-	-	-
C. spp	-	-	-	-	-	-	-
Climacodium biconcavum	13	-	-	-	83	9.6	-
Corethron histrix	-	-	-	-	-	-	-
Coscinodiscus sp	-	-	-	-	-	3.8	7.7

Table C-5a, continued

Station	I5	I7	I8	J1	J3	J5	J7
Diatoma hyalinum	-	-	-	-	-	-	-
Eucampia zoodiacus	-	-	-	75	-	-	-
Fragilaria sp	-	-	-	-	-	-	3.8
Hemiaulus haucki	-	-	-	-	-	-	-
H. membranacea	-	-	-	-	-	-	-
Lauderia borealis	-	-	-	-	-	-	7.7
Navicula sp	-	-	25	-	-	3.8	3.8
Nitzschia pungens var. atlantica	-	-	-	-	-	-	-
N. seriata	-	-	-	17	-	-	-
Rhizosolenia (total)	87	75	50	8.3	17	77	77
R. alata	-	-	-	8.3	-	-	-
R. bergonii	-	-	25	-	-	-	-
R. calcar avis	-	-	-	-	-	-	-
R. fragilissima	-	-	-	-	-	-	-
R. hebetata f. semispina	-	-	25	-	-	-	3.8
R. imbricata	87	75	-	-	17	48	50
R. stolterfothi	-	-	-	-	-	-	-
R. styliformis	-	-	-	-	-	29	23
Schroderella delicatula	-	-	-	-	-	-	-
Skeletomema costatum	-	-	-	-	-	-	-
Thalassiosira rotula	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	-	-	-	-	-	-	-
T. longissima	-	-	-	-	-	-	-

TABLE C-5b. Less abundant diatoms (less than 6% at any station) taken in surface water samples (200 ml) at Shumpu Maru (NMO) stations.

Achnanthes brevipes	C13
Actinopticus sp	C5
Asterionella japonica	A11
Asteromphalus sp	I1
Bacteriastrum comosum	A7, A8, C8, C11, C13
B. mediterraneum	A7
B. spp	A7, A11, D1
Chaetoceros borealis	A7
C. dadayi	H1
C. denticulatum	A3, D1, H1
C. eibenii	C7
C. pendulus	A11
C. brevis	A9
C. curvisetus	A7
C. decipiens	A8, C9
C. diversus	D1
C. paradoxum	A9
Climacodium frauenfeldianum	A3
Dactyliosolen tenuis	A1, D1
Ditylum brightwellii	H1
Eucampia cornuta	A7, A11
Leptocylindrus danicus	A7, A8, A11, C8
Merosira sp	C8
Nitzschia longissima	A11, H1
N. sigma	A5, C3, C7
Planktoniella sol	H1
Pleurosigma angulatum	A5, H1
P. elongatum	C3, C5, E3
Rhizosolenia ala. f. gracillima	A7
R. cylindrus	E3
R. setigera	A1, I1
R. spp	A8

TABLE C-6a1. More abundant diatoms by per cent taken in the surface water samples (330 ml) at Ryofu Maru Stations 449-487.[a]

Station	449	450	451	452	453	454	455	456	457	458
Latitude (N)	34°34'	34°58'	35°47'	37°00'	36°53'	36°53'	36°47'	36°28'	37°23'	38°31'
Longitude (E)	141°17'	141°28'	141°29'	141°30'	141°52'	142°26'	143°08'	144°10'	144°05'	144°10'
Date (August 1955)	14	14	14	14	15	15	15	15	16	16
Time (GCT)	0115	0637	1240	2152	0105	0630	1225	2135	0629	1535
No. of total plankton/liter[b]	25(0)	11(1)	95(0)	20(1)	11(2)	30(0)	25(0)	40(0)	12(1)	15(3)
No. of Diatoms/liter[b]	10(0)	85(0)	55(0)	20(1)	11(2)	-	10(0)	10(0)	-	15(3)
No. of misc. plankton/liter[b]	15(0)	20(0)	40(0)	-	35(0)	30(0)	15(0)	30(0)	12(1)	-
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	-	-	-	28	1.4	-	-	-	-	23
Subgenus Phaeoceros (total)	-	-	-	28	-	-	-	-	-	0.4
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	-	-	-	-	-
C. densus	-	-	-	25	-	-	-	-	-	-
C. pendulus	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	-	-	-	-	-	-	-	-	0.4
C. spp (misc. Phaeoceros)	-	-	-	2.5	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	-	-	-	1.4	-	-	-	-	23
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. laciniosus	-	-	-	-	1.4	-	-	-	-	23
C. lorenzianus	-	-	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	-	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	-	-	-	1.8	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	10	-	-	-	-	-	-
C. spp	-	5.9	-	2.5	-	-	-	-	-	-
Dactyliosolen tenuis	-	-	-	-	-	-	-	100	-	-
Leptocylindrus danicus	-	-	-	-	67	-	-	-	-	-
Navicula membranacea	-	-	-	-	-	-	-	-	-	-
Nitzschia delicatissima	-	5.9	18	-	-	-	-	-	-	-
N. seriata	-	-	-	-	0.9	-	-	-	-	-
N. sp	-	-	-	-	-	-	-	-	-	-
Pennatae misc.	-	5.9	9.1	-	-	-	50	-	-	-
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Pseudoeunotia doliolus	-	-	-	-	-	-	-	-	-	-
Rhizosolenia (total)	100	82	73	60	23	-	50	-	-	77
R. alata	-	-	-	13	3.6	-	-	-	-	4.1
R. alata f. gracillima	-	-	18	2.5	3.2	-	-	-	-	-
R. bergoni	-	-	-	2.5	5.9	-	-	-	-	-
R. castracanei	-	-	9.1	-	-	-	-	-	-	-
R. calcar avis	-	71	46	40	3.2	-	-	-	-	73
R. styliformis	-	-	-	-	0.5	-	50	-	-	-
R. styl. v. latissima	-	5.9	-	2.5	1.4	-	-	-	-	-
R. styl. v. longispina	100	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-	-
Thalassiothrix delicatula	-	-	-	-	3.2	-	-	-	-	-
T. mediterranea	-	-	-	-	-	-	-	-	-	-

a) Identified by R. Marumo, O. Asaoka and M. Amano.
b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

Table C-6a1, continued

Station	459	460	461	462	463	464	465	466	467	468
Latitude (N)	37°22'	36°52'	37°41'	37°26'	36°49'	36°16'	35°46'	35°35'	35°05'	36°14'
Longitude (E)	145°52'	147°37'	147°06'	147°00'	146°41'	146°09'	146°38'	147°19'	148°08'	148°16'
Date (August 1955)	17	17	17	18	18	18	18	19	19	19
Time (GCT)	0334	1238	2143	0330	0835	1535	2130	0325	1233	2127
No. of total plankton/liter	55(0)	75(0)	27(2)	21(2)	85(0)	55(0)	34(1)	18(1)	95(0)	13(1)
No. of Diatoms/liter	40(0)	60(0)	27(2)	21(2)	50(0)	40(0)	24(1)	40(0)	5(0)	90(0)
No. of misc. plankton/liter	15(0)	15(0)	45(0)	45(0)	35(0)	15(0)	10(1)	14(1)	90(0)	35(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	-	-	45	2.2	-	25	4.2	-	100	-
Subgenus Phaeoceros (total)	-	-	0.4	1.2	-	25	4.2	-	100	-
C. coarctatus	-	-	0.4	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	25	4.2	-	-	-
C. densus	-	-	-	-	-	-	-	-	-	-
C. pendulus	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	-	-	1.2	-	-	-	-	-	-
C. spp (misc. Phaeoceros)	-	-	-	-	-	-	-	-	100	-
Subgenus Hyalochaete (total)	-	-	45	1.0	-	-	-	-	-	-
C. affinis	-	-	16	1.0	-	-	-	-	-	-
C. compressus	-	-	6.7	-	-	-	-	-	-	-
C. curvisetus	-	-	19	-	-	-	-	-	-	-
C. laciniosus	-	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	1.3	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	-	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	92	-	-	-	50	60	-	-	22
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Dactyliosolen tenuis	-	-	-	2.2	-	-	17	-	-	-
Leptocylindrus danicus	-	-	4.1	2.2	-	-	-	-	-	11
Navicula membranacea	-	-	-	-	-	-	-	-	-	-
Nitzschia delicatissima	-	-	-	-	-	-	-	-	-	-
N. seriata	-	-	-	-	-	-	-	-	-	-
N. sp	13	-	1.7	0.5	10	-	-	-	-	-
Pennatae misc.	-	-	-	2.2	10	13	2.1	25	-	-
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Pseudoeunotia doliolus	-	-	-	-	40	-	-	-	-	-
Rhizosolenia (total)	88	8.3	47	90	40	13	15	75	-	67
R. alata	13	-	3.4	0.5	-	-	2.1	13	-	5.6
R. alata f. gracillima	13	-	2.6	1.2	-	-	2.1	-	-	-
R. bergoni	-	-	1.3	-	-	-	-	-	-	-
R. castracanei	-	-	-	-	-	-	-	-	-	-
R. calcar avis	25	8.3	37	88	10	-	10	50	-	39
R. styliformis	25	-	1.3	0.5	10	13	-	13	-	-
R. styl. v. latissima	13	-	0.7	-	20	-	-	-	-	11
R. styl. v. longispina	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-	-
Thalassiothrix delicatula	-	-	-	-	-	-	-	-	-	-
T. mediterranea	-	-	-	-	-	-	-	-	-	-

Table C-6a1, continued

Station	469	470	471	472	473	474	475	476	477	478
Latitude (N)	37°01'	37°32'	36°36'	36°09'	35°40'	35°10'	35°51'	36°26'	37°10'	36°44'
Longitude (E)	148°00'	147°49'	149°21'	50°16'	150°58'	151°31'	151°57'	151°48'	151°52'	152°32'
Date (August 1955)	20	20	20	21	21	21	21	22	22	22
Time (GCT)	0337	0940	2132	0335	0942	1545	2145	0340	0932	1550
No. of total plankton/liter	24(1)	20(2)	31(1)	16(1)	10(0)	30(0)	25(0)	35(1)	18(1)	36(1)
No. of Diatoms/liter	20(1)	19(2)	27(1)	14(1)	5(0)	20(0)	5(0)	31(1)	13(1)	31(1)
No. of misc. plankton/liter	35(0)	40(0)	45(0)	20(0)	5(0)	10(0)	20(0)	40(0)	45(0)	45(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	19	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	2.9	-	-	-	-	-	-	-	-
Chaetoceros (total)	5.0	48	7.5	75	100	25	-	8.2	12	37
Subgenus Phaeoceros (total)	5.0	0.3	-	39	100	25	-	4.9	-	31
C. coarctatus	-	-	-	39	-	-	-	-	-	26
C. dadayi	-	-	-	-	-	25	-	-	-	-
C. densus	-	-	-	-	-	-	-	-	-	-
C. pendulus	-	-	-	-	100	-	-	-	-	-
C. peruvianus	-	0.3	-	-	-	-	-	1.6	-	1.6
C. spp (misc. Phaeoceros)	5.0	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	48	7.5	36	-	-	-	3.3	12	6.5
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	-	-	32	-	-	-	-	-	-
C. curvisetus	-	1.6	-	-	-	-	-	-	-	-
C. laciniosus	-	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	19	3.8	-	-	-	-	3.3	3.9	6.5
C. spp (misc. Hyalochaete)	-	19	3.8	3.6	-	-	-	-	7.7	-
Climacodium biconcavum	-	1.8	-	-	-	-	-	-	-	4.8
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	-	-
C. spp	10	0.3	1.9	-	-	-	-	-	-	-
Dactyliosolen tenuis	35	1.3	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	8.1	-	-	-	-	-	4.9	-	-
Navicula membranacea	-	-	-	-	-	-	-	-	-	-
Nitzschia delicatissima	-	-	-	-	-	-	-	-	-	-
N. seriata	-	2.1	3.8	-	-	-	-	-	-	-
N. sp	-	-	-	-	-	-	-	-	-	-
Pennatae misc.	-	0.5	7.5	14	-	25	100	13	7.7	3.2
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Pseudoeunotia doliolus	-	-	-	-	-	-	-	-	-	-
Rhizosolenia (total)	38	13	72	11	-	50	-	72	73	53
R. alata	2.5	1.3	5.7	-	-	-	-	26	15	13
R. alata f. gracillima	2.5	0.3	-	-	-	-	-	1.6	-	4.8
R. bergoni	-	1.0	3.8	-	-	-	-	1.6	12	3.2
R. castracanei	5.0	-	-	-	-	-	-	-	-	-
R. calcar avis	25	6.2	53	7.1	-	25	-	30	31	19
R. styliformis	-	-	-	3.6	-	25	-	8.2	-	4.8
R. styl. v. latissima	-	-	9.4	-	-	-	-	4.9	15	8.1
R. styl. v. longispina	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	13	1.8	-	-	-	-	-	-	-	-
Thalassiothrix delicatula	-	-	-	-	-	-	-	-	-	-
T. mediterranea	-	-	-	-	-	-	-	-	-	-

Table C-6a1, continued

Station	479	480	481	482	483	484	485	486	487
Latitude (N)	36°18'	35°54'	33°37'	34°02'	34°31'	35°03'	34°36'	34°19'	33°37'
Longitude (E)	153°03'	153°38'	154°58'	155°34'	156°26'	156°53'	157°23'	158°00'	158°17'
Date (August 1955)	22	23	23	24	24	24	24	25	25
Time (GCT)	2136	0330	2157	0330	0930	1550	2135	0320	0929
No. of total plankton/liter	29(1)	32(1)	40(0)	85(0)	25(1)	36(1)	11(1)	10(0)	15(0)
No. of Diatoms/liter	15(1)	27(1)	10(0)	55(0)	17(1)	28(1)	60(0)	0	5(0)
No. of misc. plankton/liter	14(1)	55(0)	30(0)	30(0)	80(0)	80(0)	45(0)	10(0)	10(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	-	6.1	-	-	-	-
Chaetoceros (total)	-	1.9	-	9.1	30	3.6	-	-	-
Subgenus Phaeoceros (total)	-	1.9	-	-	6.1	3.6	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	3.6	-	-	-
C. densus	-	-	-	-	-	-	-	-	-
C. pendulus	-	-	-	-	-	-	-	-	-
C. peruvianus	-	1.9	-	-	6.1	-	-	-	-
C. spp (misc. Phaeoceros)	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	-	-	9.1	24	-	-	-	-
C. affinis	-	-	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-
C. laciniosus	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	-	-	18	-	-	-	-
C. spp (misc. Hyalochaete)	-	-	-	9.1	6.1	-	-	-	-
Climacodium biconcavum	13	-	-	-	-	-	-	-	-
Coscinodiscus radiatus	-	-	-	-	-	-	-	-	-
C. spp	-	1.9	50	-	3.0	1.8	-	-	-
Dactyliosolen tenuis	-	1.9	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	20	-	-	-
Navicula membranacea	-	-	-	9.1	-	-	-	-	-
Nitzschia delicatissima	-	-	-	-	-	-	-	-	-
N. seriata	-	-	-	-	-	-	-	-	-
N. sp	-	-	-	-	-	-	-	-	-
Pennatae misc.	3.3	17	50	27	3.0	1.8	-	-	-
Pleurosigma sp	-	-	-	9.1	3.0	-	-	-	-
Pseudoeunotia doliolus	-	-	-	-	-	-	-	-	-
Rhizosolenia (total)	77	77	-	45	48	61	100	-	100
R. alata	6.7	25	-	27	18	25	8.3	-	-
R. alata f. gracillima	3.3	3.8	-	-	-	-	-	-	-
R. bergoni	3.3	3.8	-	-	12	8.9	33	-	-
R. castracanei	3.3	5.7	-	-	3.0	8.9	17	-	-
R. calcar avis	27	38	-	9.1	12	18	25	-	100
R. styliformis	3.3	1.9	-	-	-	-	-	-	-
R. styl. v. latissima	30	-	-	9.1	3.0	-	17	-	-
R. styl. v. longispina	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-
Thalassiothrix delicatula	-	-	-	-	6.1	7.1	-	-	-
T. mediterranea	6.7	-	-	-	-	-	-	-	-

TABLE C-6a2. Less abundant diatoms (less than 6% at any station) taken in surface water samples (330 ml) at Ryofu Maru Stations 449-487.

PLANKTON DIATOMS	
Bacteriastrum comosum	470
B. delicatulum	470
B. hyalinum	461
Chaetoceros tetrastichon	476, 478
C. brevis	470
C. decipiens	470
C. didymus	461, 470
C. messanensis	470
Dactyliosolen antarcticus	484
Guinardia flaccida	453, 470
Nitzschia closterium	453, 465
Rhizosolenia al. f. indica	453
R. cylindrus	450
R. fragilissima	470
R. shrubsolei	469, 470
R. stolterfothi	453, 470
Thalassiothrix longissima	453, 462, 470, 471, 476-478
MISCELLANEOUS PLANKTON	
Trichodesmium erytheraeum	449, 457, 459, 465-467, 469, 470, 474, 475, 481
Amphisolenia bidentata	463, 468
Ceratium carriense	480
C. cont. v. saltans	450
C. deflexum	456, 466, 481
C. extensum	463, 465
C. fusus	475, 483, 485
C. furca	450, 457, 459, 464-466, 476
C. mac. subsp. gallicum	483, 484
C. massiliense	480
C. pentagonum	456, 463, 472
C. pulchellum	453, 466
C. tripos	462
C. trichoceros	457, 463, 480
Ceratocorys horrida	477
Noctiluca scintillans	479, 483, 484
Pyrocystis pseudonoctiluca	485
Distephanus speculum	465
Globigerina bulloides	470
Rhabdonella spiralis	475
Sticholonche zanclea	466, 482, 483, 485
Tintinnoinea miscellaneous	451, 453, 457, 459, 465-467, 469, 471, 472, 477, 478, 482, 486, 487
Copepoda nauplius	449-451, 453-456, 460-465, 466-486
Copepoda except nauplius	450, 451, 454-457, 460, 464, 465, 467, 468, 470, 471, 475-480, 482-484

TABLE C-6b1. More abundant diatoms by per cent taken in surface water samples (330 ml) at Ryofu Maru Stations 488-526.

Station	488	489	490	491	492	493	494	495	496	497
Latitude (N)	34°12'	34°56'	35°25'	36°05'	36°10'	36°08'	36°12'	36°24'	36°29'	37°22'
Longitude (E)	158°45'	159°00'	159°39'	160°02'	158°36'	157°11'	155°58'	154°53'	153°53'	153°18'
Date	VIII-25	VIII-25	VIII-26	VIII-26	VIII-26	VIII-27	VIII-27	VIII-27	VIII-27	VIII-28
Time (GCT)	1535	2135	0328	0940	1840	0345	0932	1555	2145	0627
No. of total plankton/liter[a)]	90(0)	50(0)	15(1)	17(1)	20(0)	20(0)	10(0)	60(0)	11(1)	85(0)
No. of Diatoms/liter[a)]	60(0)	30(0)	11(1)	13(1)	5(0)	5(0)	0	30(0)	55(0)	30(0)
No. of misc. plankton/liter[a)]	30(0)	20(0)	40(0)	40(0)	15(0)	15(0)	10(0)	30(0)	55(0)	55(0)
Diatoms (per cent)	100	100	100	100	100	100	-	100	100	100
Actinoptychus undulatus	-	-	-	-	-	-	-	-	-	-
Asterionella japonica	-	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	-	-	-	-	-	-	-
B. hyalinum	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	-	67	91	-	-	-	-	67	-	-
Subgenus Phaeoceros (total)	-	-	18	-	-	-	-	67	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	18	-	-	-	-	-	-	-
C. peruvianus	-	-	-	-	-	-	-	-	-	-
C. tetrastichon	-	-	-	-	-	-	-	67	-	-
Subgenus Hyalochaete (total)	-	67	73	-	-	-	-	-	-	-
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	-	73	-	-	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	-	-	-	-	-	-	-	-	-	-
C. didymus	-	-	-	-	-	-	-	-	-	-
C. laciniosus	-	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	-	-	-	-	-	-	-	-
C. messanensis	-	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	67	-	-	-	-	-	-	-	-
Climacodium biconcavum	33	17	-	7.7	-	-	-	-	-	-
Coscinodiscus spp	-	-	-	-	-	-	-	-	-	-
Dactyliosolen tenuis	-	-	-	-	-	-	-	-	-	-
Hemiaulus haucki	-	-	-	-	-	-	-	17	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-
Nitzschia closterium	-	-	-	7.7	-	-	-	-	-	17
N. delicatissima	-	-	-	-	-	-	-	-	-	-
N. seriata	-	-	-	-	-	-	-	-	-	-
N. sp	8.3	-	-	3.8	-	-	-	-	-	-
Pleurosigma sp	17	-	-	3.8	-	-	-	-	-	-
Rhizosolenia (total)	33	17	4.5	27	-	-	-	17	64	50
R. alata	-	-	-	7.7	-	-	-	-	18	-
R. ala. f. gracillima	-	-	-	-	-	-	-	-	-	-
R. ala. f. indica	-	-	-	-	-	-	-	17	-	-
R. bergoni	-	-	-	-	-	-	-	-	-	33
R. calcar avis	33	17	4.5	3.8	-	-	-	-	36	17
R. castracanei	-	-	-	15	-	-	-	-	-	-
R. styliformis	-	-	-	-	-	-	-	-	-	-
R. styl. v. latissima	-	-	-	-	-	-	-	-	9.1	-
Thalassiothrix delicatula	-	-	-	-	-	-	-	-	9.1	-
T. mediterranea	-	-	-	46	-	-	-	-	-	17
Pennatae (misc.)	8.3	-	4.5	3.8	100	100	-	-	27	17

Table C-6b1, continued

Station	498	499	500	501	502	503	504	505	506	507
Latitude (N)	37°24'	37°34'	37°40'	37°23'	38°28'	38°28'	38°32'	38°28'	38°30'	38°26'
Longitude (E)	152°22'	150°38'	149°51'	149°05'	148°52'	148°02'	147°02'	146°11'	145°27'	144°24'
Date	VIII-28	VIII-28	VIII-29	VIII-29	VIII-29	VIII-30	VIII-30	VIII-30	VIII-31	VIII-31
Time (GCT)	1245	2140	0338	0935	1930	0350	1232	1831	0041	0945
No. of total plankton/liter	80(0)	29(1)	21(1)	34(3)	12(1)	20(1)	34(2)	25(3)	69(3)	95(1)
No. of Diatoms/liter	45(0)	27(1)	85(0)	33(3)	85(0)	13(1)	34(2)	25(3)	68(3)	93(1)
No. of misc. plankton/liter	35(0)	15(0)	13(1)	30(1)	35(0)	65(0)	15(0)	18(1)	12(1)	20(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Actinoptychus undulatus	-	-	-	-	-	-	-	-	-	-
Asterionella japonica	-	-	-	3.1	12	-	-	7.3	14	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	-	9.0	-	-	-	7.2	3.3	-
B. hyalinum	-	-	-	1.1	-	-	-	1.0	1.8	-
Chaetoceros (total)	-	7.4	-	66	35	42	9.5	61	62	12
Subgenus Phaeoceros (total)	-	1.9	-	0.5	-	-	0.2	1.9	0.4	2.7
C. coarctatus	-	-	-	-	-	-	-	-	-	2.7
C. dadayi	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	1.9	-	0.5	-	-	0.2	0.4	0.3	-
C. tetrastichon	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	5.6	-	66	35	42	9.3	59	61	9.7
C. affinis	-	-	-	28	-	42	-	7.2	9.9	1.6
C. compressus	-	-	-	7.8	-	-	1.9	21	2.0	-
C. curvisetus	-	-	-	7.8	-	-	-	3.0	0.6	-
C. debilis	-	-	-	2.7	-	-	-	9.0	17	2.7
C. didymus	-	5.6	-	3.8	12	-	-	1.7	1.9	1.1
C. laciniosus	-	-	-	1.6	-	-	-	-	1.0	-
C. lorenzianus	-	-	-	3.3	12	-	0.7	1.2	3.0	-
C. messanensis	-	-	-	-	-	-	-	3.2	0.4	-
C. radicans	-	-	-	-	-	-	-	6.4	20	4.3
C. spp (misc. Hyalochaete)	-	-	-	5.6	12	-	1.8	0.5	3.8	-
Climacodium biconcavum	-	-	-	1.5	29	15	-	0.4	1.0	-
Coscinodiscus spp	11	-	-	-	-	-	-	-	-	-
Dactyliosolen tenuis	-	26	53	0.5	-	27	-	-	-	-
Hemiaulus haucki	-	-	-	-	-	-	-	-	0.3	-
Leptocylindrus danicus	-	-	-	5.4	-	-	-	6.4	5.8	-
Nitzschia closterium	-	-	-	-	-	-	-	-	0.1	-
N. delicatissima	-	-	-	4.7	-	-	-	4.1	-	-
N. seriata	-	3.7	-	-	-	-	-	0.8	6.8	-
N. sp	-	1.9	-	-	-	3.8	-	0.1	-	-
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia (total)	78	37	29	6.3	18	7.7	86	7.1	3.9	80
R. alata	11	17	12	-	-	7.7	2.8	0.1	0.1	12
R. ala. f. gracillima	-	5.6	-	1.5	-	-	-	0.6	0.4	11
R. ala. f. indica	-	-	-	0.2	-	-	-	-	0.1	0.5
R. bergoni	-	1.9	-	0.4	-	-	0.6	1.3	0.3	0.5
R. calcar avis	44	11	18	3.3	-	-	82	0.7	0.9	56
R. castracanei	22	1.9	-	-	5.9	-	-	-	-	-
R. styliformis	-	-	-	0.4	12	-	0.6	0.1	0.2	0.5
R. styl. v. latissima	-	-	-	-	-	-	-	-	-	-
Thalassiothrix delicatula	-	-	5.9	-	-	3.8	-	-	-	1.6
T. mediterranea	-	-	5.9	-	-	-	-	-	-	-
Pennatae (misc.)	11	24	5.9	-	5.9	-	0.6	0.2	-	3.2

Table C-6b1, continued

Station	508	509	510	511	512	513	514	515	516	517
Latitude (N)	38°25'	39°32'	39°32'	39°31'	39°30'	39°34'	39°31'	40°21'	40°28'	40°26'
Longitude (E)	143°39'	144°04'	145°16'	146°10'	147°32'	148°42'	150°04'	149°56'	149°01'	148°04'
Date	VIII-31	IX-6	IX-7	IX-7	IX-7	IX-8	IX-8	IX-8	IX-9	IX-9
Time (GCT)	1545	2135	0645	1240	2133	0535	1235	2145	0535	1230
No. of total plankton/liter	25(2)	22(3)	13(2)	17(2)	29(1)	15(2)	52(2)	56(2)	29(1)	21(2)
No. of Diatoms/liter	25(2)	22(3)	13(2)	16(2)	21(1)	14(2)	41(2)	54(2)	23(1)	21(2)
No. of misc. plankton/liter	55(0)	20(1)	30(0)	30(0)	80(0)	30(0)	70(0)	15(2)	60(0)	75(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Actinoptychus undulatus	-	-	0.4	-	-	-	-	-	-	-
Asterionella japonica	-	0.9	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	11	2.8	-	3.7	-	-	-	6.7	-	-
B. hyalinum	2.0	-	-	-	-	2.1	3.1	23	4.3	-
Chaetoceros (total)	50	53	44	45	7.1	28	36	58	2.2	75
Subgenus Phaeoceros (total)	-	1.1	6.5	13	-	9.8	0.7	-	-	-
C. coarctatus	-	-	4.6	12	-	6.3	-	-	-	-
C. dadayi	-	-	-	-	-	-	-	-	-	-
C. peruvianus	-	0.6	1.9	0.6	-	3.5	0.7	-	-	1.0
C. tetrastichon	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	50	52	38	32	7.1	18	35	58	2.2	74
C. affinis	41	3.5	-	-	-	-	-	-	-	-
C. compressus	-	34	14	-	-	4.9	29	13	-	33
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	2.4	2.8	-	-	-	-	-	-	-	-
C. didymus	1.0	5.9	4.2	26	2.4	4.9	2.9	19	-	-
C. laciniosus	-	-	1.5	-	-	-	-	-	-	-
C. lorenzianus	0.8	5.0	4.2	3.0	-	8.4	-	13	2.2	27
C. messanensis	-	-	-	-	-	-	1.7	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	14
C. spp (misc. Hyalochaete)	4.9	-	14	3.0	4.8	-	1.2	13	-	-
Climacodium biconcavum	5.7	-	4.6	-	4.8	-	-	-	15	-
Coscinodiscus spp	-	-	-	-	4.8	-	-	-	-	-
Dactyliosolen tenuis	-	-	-	-	-	-	1.5	2.6	-	4.9
Hemiaulus haucki	-	-	-	-	-	-	-	-	2.2	-
Leptolylindrus danicus	3.7	17	6.5	9.1	-	45	43	-	-	-
Nitzschia closterium	-	-	-	-	-	-	0.5	-	-	-
N. delicatissima	-	-	-	-	-	-	-	-	-	-
N. seriata	0.8	14	1.5	15	-	-	3.4	-	4.3	-
N. sp	0.2	0.9	-	-	-	-	-	-	-	-
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia (total)	23	11	29	22	45	18	8.5	4.6	39	14
R. alata	3.2	1.1	5.0	2.4	-	-	3.9	-	-	1.0
R. ala. f. gracillima	3.5	2.4	11	2.4	2.4	2.8	-	-	2.2	-
R. ala. f. indica	-	-	-	-	-	-	-	-	-	-
R. bergoni	1.0	0.9	1.9	1.2	2.4	5.6	1.5	1.3	4.3	5.9
R. calcar avis	12	3.9	8.8	9.1	33	5.6	1.2	2.6	24	5.9
R. castracanei	-	-	-	-	-	-	-	-	-	-
R. styliformis	0.8	0.6	2.7	3.0	-	0.7	-	-	2.2	0.5
R. styl. v. latissima	0.2	-	-	-	2.4	-	-	-	6.5	-
Thalassiothrix delicatula	-	-	-	-	-	-	-	-	-	-
T. mediterranea	0.2	-	1.9	-	-	-	-	1.7	11	3.9
Pennatae (misc.)	0.4	0.4	5.3	3.0	36	4.9	3.9	2.6	22	2.0

Table C-6b1, continued

Station	518	519	520	521	522	523	524	525	526
Latitude (N)	40°28'	40°26'	41°26'	41°30'	41°27'	41°30'	42°25'	42°23'	42°30'
Longitude (E)	146°32'	144°58'	146°21'	147°32'	148°43'	149°51'	149°24'	147°16'	145°51'
Date	IX-9	IX-10	IX-10	IX-11	IX-11	IX-11	IX-12	IX-12	IX-13
Time (GCT)	2138	0629	2145	0535	1315	2140	0935	2130	0532
No. of total plankton/liter	34(3)	27(1)	27(2)	85(2)	16(3)	73(1)	19(2)	40(1)	29(2)
No. of Diatoms/liter	34(3)	24(1)	26(2)	85(2)	16(3)	54(1)	17(2)	36(1)	28(2)
No. of misc. plankton/liter	15(1)	35(0)	30(0)	45(0)	20(1)	20(1)	12(1)	35(0)	12(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Actinoptychus undulatus	-	2.1	0.4	0.4	-	11	-	-	-
Asterionella japonica	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	16	2.8	-
Bacteriastrum delicatulum	-	-	-	-	-	-	-	-	-
B. hyalinum	6.7	-	-	11	6.1	-	-	-	0.7
Chaetoceros (total)	76	36.	94	85	90	77	-	24	82
Subgenus Phaeoceros (total)	2.6	2.1	-	0.1	-	4.7	-	24	0.2
C. coarctatus	1.8	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	-	-	-	-
C. peruvianus	0.9	2.1	-	0.1	-	4.7	-	24	0.2
C. tetrastichon	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	73	34	94	85	90	72	-	-	82
C. affinis	6.7	-	-	-	0.6	-	-	-	16
C. compressus	32	-	5.7	-	7.5	-	-	-	15
C. curvisetus	3.2	-	-	-	-	-	-	-	-
C. debilis	-	-	-	-	-	-	-	-	-
C. didymus	2.6	19	9.2	11	0.7	-	-	-	3.1
C. laciniosus	11	-	1.5	-	-	-	-	-	-
C. lorenzianus	2.3	15	54	20	9.5	-	-	-	31
C. messanensis	-	-	2.3	14	0.5	-	-	-	-
C. radicans	5.9	-	21	38	68	72	-	-	17
C. spp (misc. Hyalochaete)	4.4	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	8.5	-	-	-	-	-	-	-
Coscinodiscus spp	-	-	-	-	-	-	-	-	0.4
Dactyliosolen tenuis	-	15	-	1.0	0.9	-	-	-	-
Hemiaulus haucki	-	2.1	-	-	-	-	-	-	-
Leptocylindrus danicus	3.2	-	-	-	-	-	-	-	-
Nitzschia closterium	-	-	-	-	-	-	-	-	-
N. delicatissima	-	-	-	-	-	-	74	57	-
N. seriata	1.5	-	-	-	-	-	-	-	-
N. sp	-	-	-	-	-	-	-	-	-
Pleurosigma sp	-	-	-	-	-	-	-	-	-
Rhizosolenia (total)	10	30	4.2	2.1	2.7	-	-	14	16
R. alata	2.3	-	-	-	0.1	-	-	7.0	0.4
R. ala. f. gracillima	-	8.5	-	-	0.3	-	-	-	1.3
R. ala. f. indica	-	-	-	-	-	-	-	-	-
R. bergoni	2.9	4.3	3.4	1.1	0.4	-	-	-	8.4
R. calcar avis	1.8	6.4	0.4	1.0	1.9	-	-	2.8	6.4
R. castracanei	-	-	-	-	-	-	-	-	-
R. styliformis	0.6	-	0.4	-	0.1	-	-	1.4	-
R. styl. v. latissima	-	4.3	-	-	-	-	-	-	-
Thalassiothrix delicatula	-	-	-	-	-	-	-	-	-
T. mediterranea	-	-	-	-	-	-	-	-	-
Pennatae (misc.)	1.8	4.3	1.5	-	0.4	7.5	2.3	1.4	-

a) Number in parentheses indicates power of 10 by which the first number should be multiplied.

TABLE C-6b2. Less abundant diatoms (less than 6% at any station) taken in surface water samples (330 ml) at Ryofu Maru Stations 488-526.

PLANKTON DIATOMS	
Chaetoceros anastomosans	518
C. constrictus	522
C. affinis v. willei	501, 505, 506
C. brevis	509, 518
C. danicus	505
C. decipiens	501, 506
C. diversus	501
C. seychellarum	505
C. tortissimus	505
C. weissflogi	504
Climacodium frauenfeldianum	508
Corethron criophilum	508
C. hystrix	523, 524
Coscinodiscus marginatus	524
C. subconcavus	524
Dactyliosolen antarcticus	501
Hemiaulus sinensis	501, 504
Lauderia borealis	505
Leptocylindrus minimus	507, 509
Navicula membranacea	501, 505, 506
Nitzschia pacifica	505
Rhizosolenia cylindrus	518
R. delicatula	506, 509
R. fragilissima	505, 511
R. heb. f. semispina	525
R. imb. v. shrubsolei	508, 515, 517
R. robusta	514, 519
R. setigera	501, 505, 510, 512, 514
R. stolterfothi	501, 504-506, 508, 509, 511-514, 518
R. styl. v. longispina	519
Thalassionema nitzschioides	501, 506, 510
Thalassiosira decipiens	524
Thalassiothrix frauenfeldi	505, 519
T. longissima	510-515, 517, 518, 526
MISCELLANEOUS PLANKTON	
Noctiluca scintillans	505
Sticholonche zanclea	491, 495, 497, 502, 503, 508
Pyrocystis pseudonoctiluca	494, 516
Dadayiella ganymedes	497, 498, 503, 505
Salpingella acuminata	509
Steenstrupiella steenstrupi	490, 509
Tintinnus lusus-undae	489-491, 501-504, 514, 520, 523, 525, 526
Parafavella subcylindrica	523
Ptychocylis obtusa	524

Table C-6b2, continued

MISCELLANEOUS PLANKTON (cont.)	
Tintinnus maculatus	490, 495
Copepoda except nauplius	488, 491, 493, 495, 496, 498-500, 502, 507, 508-510, 512, 514-516, 522-526
Copepoda nauplius	488-492, 494-526
Distephanus speculum	524
Dinophysis homunculus	526
Amphisolenia bidentata	519
Ceratium bucephalum	505
C. deflexum	513
C. extensum	519
C. furca	522
C. fusus	508, 516, 522
C. inflexum	512, 516, 517
C. kofoidi	500, 503, 508, 521, 522, 526
C. macroceros	493, 495, 498, 504, 512
C. pentagonum	512
C. macroceros subsp gallicum	522
C. trichoceros	514, 522
C. tripos	493
C. tenue	513

TABLE C-7a1. More abundant diatoms by per cent taken in surface water samples (330 ml) at Tenyo Maru Stations 1-11.[a]

Station	1	2	3	4	5	6	7	8	9	10	11
Latitude (N)	42°48'	43°00'	43°00'	43°04'	43°00'	42°59'	43°00'	43°00'	43°00'	43°00'	43°00'
Longitude (E)	144°59'	146°00'	148°00'	150°22'	152°00'	154°18'	156°00'	158°00'	160°02'	162°00'	164°00'
Date	VII-29	VII-30	VII-30	VII-31	VII-31	VIII-1	VIII-1	VIII-2	VIII-2	VIII-3	VIII-3
Time (GCT)	2351	0559	1951	1030	1941	0753	1640	0300	1505	0553	1908
No. of total plankton/liter[b]	29(2)	56(2)	32(1)	18(2)	10(3)	28(1)	43(2)	11(2)	48(1)	70(1)	15(3)
No. of Diatoms/liter[b]	28(2)	53(2)	21(1)	18(2)	10(3)	17(1)	42(1)	11(2)	43(1)	49(1)	15(3)
No. of misc. plankton/liter[b]	12(1)	25(1)	11(1)	50(0)	70(0)	11(1)	70(0)	15(0)	45(0)	21(1)	40(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100	100
Asteromphalus sp	-	-	12	3.4	-	-	-	-	-	-	0.1
Chaetoceros (total)	25	72	38	71	4.1	44	2.4	3.6	2.3	10	7.5
Subgenus Phaeoceros (total)	8.5	72	38	71	4.1	44	2.4	3.6	2.3	10	7.5
C. convolutus	7.6	72	36	67	4.1	5.9	0.6	-	1.2	10	5.8
C. peruvianus	0.2	-	2.4	-	-	15	0.6	0.9	1.2	-	-
C. seychellarum	-	-	-	-	-	24	0.5	2.7	-	-	-
Subgenus Hyalochaete (total)	16	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	0.8	0.9	2.4	-	94	5.9	-	-	-	22	1.3
Coscinodiscus spp	0.4	-	2.4	1.1	0.7	5.9	1.0	4.5	-	11	-
Dactyliosolen tenuis	-	-	-	-	-	-	-	7.2	7.0	-	-
Denticula sp	-	-	-	-	0.2	-	-	-	10	9.2	5.1
Nitzschia delicatissima	-	13	-	-	-	-	-	-	-	19	78
N. seriata	4.3	-	14	2.8	-	8.8	58	1.8	-	5.1	-
Pseudoeunotia sp	-	-	-	-	-	-	-	-	5.8	-	-
Rhizosolenia (total)	66	10	24	19	-	5.9	16	37	35	9.2	-
R. alata	0.2	0.9	-	-	-	-	0.7	-	1.2	8.2	-
R. fragilissima	58	-	-	-	-	-	-	-	-	-	-
R. heb. f. semispina	0.2	9.4	21	18	-	2.9	15	37	34	1.0	-
R. stolterfothi	7.6	-	-	-	-	-	-	-	-	-	-
Thalassiothrix longissima	-	3.7	4.8	2.8	0.9	29	19	43	40	5.1	0.5
Tropidoneis antarctica	-	-	-	-	-	-	0.1	-	-	7.1	7.2

a) Identified by R. Marumo.
b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

TABLE C-7a2. Less abundant diatoms (less than 5% at any station) taken in surface water samples (330 ml) at Tenyo Maru Stations 1-11.

PLANKTON DIATOMS	
Bacteriastrum hyalinum	1
Biddulphia aurita	3
Cerataulina bergoni	1
Chaetoceros atlanticus	4, 11
C. densus	1
C. affinis	1
C. constrictus	1
C. curvisetus	1
C. decipiens	1
C. debilis	1
Leptocylindrus danicus	1
Nitzschia closterium	7, 10
Rhizosolenia al. f. curvirostris	7
R. al. f. gracillima	1, 7
R. bergoni	3, 6
R. obtusa	4
Thalassionema nitzschioides	1
MISCELLANEOUS PLANKTON	
Ceratium furca	6
C. fusus	4, 6
C. tripos	3, 4, 7-10
Sticholonche zanclea	6
Amphorella quadrilineata	1, 3, 6, 9
Parafavella denticulata	1
P. longidentata	1
P. subcylindrica	2, 10
P. ventricosa	2, 5
Copepoda except nauplius	1, 3, 5-7, 9, 10
C. nauplius	1-11

TABLE C-7b1. More abundant diatoms by per cent taken in surface water samples (330 ml) at Tenyo Maru Stations 12-22.

Station	12	13	14	15	16	17	18	19	20	21	22
Latitude (N)	43°00'	43°00'	43°00'	43°17'	43°33'	43°00'	43°00'	43°00'	43°57'	44°53'	45°59'
Longitude (E)	166°00'	168°00'	170°00'	172°09'	174°15'	176°00'	178°00'	180°00'	177°30'	175°00'	172°34'
Date	VIII-4	VIII-4	VIII-5	VIII-5	VIII-6	VIII-6	VIII-7	VIII-7	VIII-8	VIII-9	VIII-9
Time (GCT)	0524	1644	0448	1538	0158	1305	0052	1118	1210	0137	1616
No. of total plankton/liter[a)]	19(3)	25(3)	94(3)	80(3)	69(3)	95(2)	23(3)	53(2)	28(2)	15(3)	31(3)
No. of Diatoms/liter[a)]	19(3)	25(3)	94(3)	79(3)	69(3)	93(2)	23(3)	52(2)	26(2)	15(3)	30(3)
No. of misc. plankton/liter[a)]	27(1)	24(1)	54(1)	60(0)	60(0)	15(1)	40(0)	35(0)	14(1)	24(1)	57(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100	100
Chaetoceros (total)	16	25	1.6	1.1	0.6	54	0.8	31	2.8	10	2.7
Subgenus Phaeoceros (total)	16	25	1.6	1.1	0.6	48	0.8	31	1.9	10	2.7
C. atlanticus	4.7	5.7	0.5	0.1	0.1	1.6	-	-	-	-	1.6
C. a. v. neapolitana	-	-	-	-	-	32	-	-	-	-	-
C. concavicornis	9.5	9.7	-	0.2	-	-	-	6.9	1.1	2.2	0.3
C. convolutus	1.5	6.2	0.9	0.6	0.5	-	0.7	23	0.8	8.2	0.8
C. dichaeta	-	-	-	-	-	11	-	-	-	-	-
Subgenus Hyalochaete (total)	-	-	-	-	-	6.1	-	-	0.9	-	-
C. radicans	-	-	-	-	-	6.1	-	-	-	-	-
Denticula sp	3.7	29	4.2	3.3	1.4	2.9	1.1	-	3.8	11	-
Nitzschia delicatissima	80	44	91	95	97	29	95	41	88	75	96
N. longissima	-	-	1.9	0.2	-	1.6	0.3	9.2	0.8	0.2	-
N. seriata	-	-	-	-	-	-	-	5.8	-	-	-
Rhizosolenia (total)	0.2	0.1	-	-	-	3.9	0.1	6.3	1.5	-	0.3

a) Number in parentheses indicates power of 10 by which the first number should be multiplied.

TABLE C-7b2. Less abundant diatoms (less than 5% at any station) taken in surface water samples (330 ml) at Tenyo Maru Stations 12-22.

PLANKTON DIATOMS	
Asteromphalus heptactis	14, 17, 18, 20, 21
Chaetoceros con. v. volans	13, 14, 18, 19
C. peruvianus	17
C. constrictus	20
Corethron criophilum	14
C. hystrix	12-16, 18, 20, 21
Coscinodiscus radiatus	14
C. sub-concavus	14, 16-18, 21
Nitzschia closterium	17, 19
Pseudoeunotia doliolus	16, 17
Rhizosolenia alata f. gracillima	17, 19, 20, 22
R. ala. f. curvirostris	17
R. hebetata f. semispina	18, 19, 22
R. obtusa	12, 13
R. styliformis	17
Thalassionema curvata	13, 16, 18, 20, 22
T. nitzschioides	17
Thalassiosira decipiens	15, 18, 21, 22
T. pacifica	17, 19, 21
Thalassiothrix delicatula	12, 17, 22
T. frauenfeldi	21
T. longissima	12-15, 17, 19, 21, 22
MISCELLANEOUS PLANKTON	
Parafavella jorgenseni	12, 13, 15, 22
P. denticulata	20
P. longidentata	22
Ptychocylis obtusa	14, 22
Rhabdonella amor	17
Copepoda except nauplius	13, 14, 16, 18
Copepoda nauplius	12-18, 20-22
Ceratium fusus	22
C. lineatum	14, 18-20
C. longipes	18
C. massiliense v. almatum	22
C. tripos	21

TABLE C-7c1. More abundant diatoms by per cent taken in surface water samples (330 ml) at Tenyo Maru Stations 23-34.

Station	23	24	25	26	27	28	29	30	31	32	33	34
Latitude (N)	46°40'	47°13'	48°20'	49°07'	47°19'	46°45'	46°12'	45°28'	44°41'	43°54'	43°04'	42°15'
Longitude (E)	170°00'	167°18'	165°03'	162°30'	159°48'	157°51'	155°56'	153°53'	152°06'	150°18'	148°41'	147°04'
Date	VIII-10	VIII-10	VIII-11	VIII-12	VIII-18	VIII-18	VIII-19	VIII-20	VIII-20	VIII-21	VIII-22	VIII-22
Time (GCT)	0652	2040	0255	0413	0220	1309	0752	0611	1715	0438	1107	2323
No. of total plankton/liter[a]	55(3)	38(3)	24(3)	68(2)	14(4)	23(3)	32(2)	24(2)	18(2)	25(2)	66(1)	10(2)
No. of Diatoms/liter[a]	55(3)	38(3)	24(3)	66(2)	14(4)	23(3)	32(2)	23(2)	18(2)	24(2)	64(1)	10(2)
No. of misc. plankton/liter[a]	15(1)	45(1)	39(1)	18(1)	93(1)	48(1)	30(0)	90(0)	30(0)	11(1)	25(0)	0
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100	100	100
Chaetoceros (total)	0.6	5.3	2.2	15	1.0	6.3	61	17	20	6.1	4.7	40
Subgenus Phaeoceros (total)	0.6	5.3	2.2	15	1.0	6.3	61	17	20	6.1	4.7	9.8
C. coarctatus	-	-	-	-	-	-	-	-	-	-	-	6.9
C. concavicornis	0.5	1.6	0.3	7.7	1.0	6.3	61	17	20	0.5	3.2	0.5
C. convolutus	-	3.2	-	5.5	-	-	-	-	-	4.7	-	-
Subgenus Hyalochaete (total)	-	-	-	-	-	-	-	-	-	-	-	30
C. lorenzianus	-	-	-	-	-	-	-	-	-	-	-	27
Corethron hystrix	-	0.1	-	11	85	4.9	-	-	-	-	-	-
Denticula sp	5.0	6.5	7.9	-	6.6	13	-	25	25	23	-	-
Nitzschia delicatissima	94	88	89	73	7.1	75	39	39	50	66	85	26
Rhizosolenia (total)	0.1	-	0.3	-	-	0.3	-	3.8	-	-	7.1	32
R. bergoni	-	-	-	-	-	-	-	-	-	-	-	5.9
R. calcar avis	-	-	-	-	-	-	-	-	-	-	-	23
R. hebetata f. semispina	-	-	-	-	-	-	-	-	-	-	55	2.0
Thalassiothrix longissima	-	0.1	0.5	-	0.1	-	-	15	1.7	-	0.8	-

a) Number in parentheses indicates power of 10 by which the first number should be multiplied.

TABLE C-7c2. Less abundant diatoms (less than 5% at any station) taken in surface water samples (330 ml) at Tenyo Maru Stations 23-34.

PLANKTON DIATOMS	
Asteromphalus heptactis	23-26, 32-33
Chaetoceros atlanticus	23-26, 32
C. peruvianus	33, 34
C. decipiens	34
Coscinodiscus marginatus	31-34
Rhizosolenia alata	34
R. ala. f. curvirostris	23
R. ala. f. gracillima	23, 25, 33
R. ala. f. obtusa	28, 30
R. hebetata f. hiemalis	25, 30
Thalassiothrix delicatula	23, 34
MISCELLANEOUS PLANKTON	
Ceratium fusus	24, 26
C. lineatum	23, 25
C. longipes	30
C. tripos	33
Acanthostomella norvegica	25, 27, 28, 30
Codonellopsis frigida	24, 25, 27
Parafavella longidentata	23-28, 32
P. ventricosa	28, 30, 32
Ptychocylis acuta	24, 25, 27
P. drygalski	25, 30
Copepoda except nauplius	23-33
Copepoda nauplius	28, 30, 33

TABLE C-8a1. More abundant diatoms by per cent taken in surface water samples (500 ml) at Shumpu Maru (KMO) stations. [a]

Station	I-1	I-2	I-3	I-4	I-5	I-6	I-7	I-8	K-1	K-2
Latitude (N)	31°13'	30°58'	30°44'	30°30'	30°09'	29°49'	29°28'	29°00'	33°00'	32°40'
Longitude (E)	131°35'	131°50'	132°09'	132°25'	132°49'	133°13'	133°37'	134°10'	134°10'	134°10'
Date	VIII-22	VIII-22	VIII-21	VIII-21	VIII-21	VIII-21	VIII-21	VIII-21	VIII-19	VIII-19
Time (GCT)	0502	0200	2207	1854	1440	1025	0610	0000	0414	0700
Depth (m)	0	0	0	0	0	0	0	0	0	0
No. of total plankton/liter[b]	37(1)	59(3)	60(0)	76(0)	10(1)	26(0)	56(0)	46(0)	12(3)	21(2)
No. of Diatoms/liter[b]	36(1)	59(3)	60(0)	66(0)	92(0)	18(0)	38(0)	46(0)	12(3)	20(2)
No. of misc. plankton/liter[b]	10(0)	16(1)	0	10(0)	8(0)	8(0)	18(0)	0	20(0)	10(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	-	-	-	-	-	-	-	-	1.4	1.0
B. comosum	-	-	-	-	-	-	-	-	0.6	-
B. varians	3.9	0.3	-	-	-	-	-	-	3.1	1.4
Cerataulina bergoni	8.4	6.0	-	3.0	-	-	5.3	4.4	2.4	17
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	-	-	-	-	-
C. peruvianus	0.6	-	-	3.0	-	-	-	-	-	-
C. affinis	-	1.2	-	-	-	-	-	-	3.1	-
C. compressus	4.5	50	-	-	-	-	-	-	36	38
C. curvisetus	2.3	-	-	-	-	-	-	-	-	-
C. decipiens	1.1	0.5	-	6.1	-	-	-	-	-	-
C. didymus	3.9	0.8	-	6.1	-	-	-	-	4.0	1.9
C. distans	-	2.3	-	-	-	-	-	-	4.8	1.9
C. diversus	-	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	-	-	-	-	-	-	0.5	-
Climacodium frauenfeldianum	3.4	-	-	-	-	56	11	-	0.8	1.0
Coscinodiscus excentricus	-	-	-	3.0	2.2	-	-	4.4	0.3	-
C. perforatus	-	-	-	3.0	2.2	-	-	-	-	-
C. radiatus	0.6	-	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	0.7	-	-	-	-	-	-	1.6	1.9
Guinardia flaccida	-	-	-	-	-	-	-	-	0.2	-
Hemiaulus haucki	2.8	-	-	-	-	-	-	-	-	-
Lauderia borealis	5.1	-	-	-	-	-	-	-	0.3	-
Leptocylindrus danicus	20	23	100	43	6.5	22	-	22	28	18
Nitzschia closterium	0.6	-	-	15	17	11	15	-	0.2	-
N. delicatissima	0.6	0.2	-	-	2.2	11	11	-	0.3	1.4
N. seriata	2.8	6.2	-	-	4.3	-	-	-	5.4	8.7
Rhizosolenia alata f. gracillima	3.4	-	-	3.0	-	-	5.3	-	0.6	-
R. alata f. indica	-	-	-	-	-	-	-	-	0.3	-
R. bergoni	-	-	-	-	-	-	-	-	0.5	1.0
R. calcar avis	2.3	-	-	3.0	-	-	-	-	0.3	1.4
R. castracanei	-	-	-	-	-	-	-	-	-	-
R. hebetata f. semispina	-	-	-	-	-	-	-	8.2	-	1.0
R. imbricata	-	-	-	-	-	-	-	13	-	-
R. setigera	-	2.3	-	-	-	-	-	-	1.6	1.0
R. stolterfothi	-	-	-	-	-	-	-	-	0.5	-
R. styliformis	-	0.2	-	-	-	-	-	-	0.5	0.5
Skeletonema constatum	30	5.6	-	12	65	-	53	44	0.8	3.9
Thalassionema nitzschioides	1.1	0.4	-	-	-	-	-	-	-	-

a) Identified by F. Uyeno.
b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

Table C-8a1, continued

Station	K-3	K-4	K-5	K-6	K-7	K-8	G-1	G-2	G-3
Latitude (N)	32°10'	31°40'	31°10'	30°40'	30°10'	29°40'	33°20'	33°00'	32°30'
Longitude (E)	134°10'	134°10'	134°10'	134°10'	134°10'	134°10'	135°40'	135°40'	135°40'
Date	VIII-19	VIII-19	VIII-20	VIII-20	VIII-20	VIII-20	VIII-27	VIII-28	VIII-28
Time (GCT)	1658	2122	0318	0743	1206	1610	2310	0242	0755
Depth (m)	0	0	0	0	0	0	0	0	0
No. of total plankton/liter	92(0)	56(0)	28(0)	18(0)	22(0)	34(0)	30(1)	81(2)	46(0)
No. of Diatoms/liter	70(0)	44(0)	24(0)	18(0)	20(0)	34(0)	28(1)	81(2)	32(0)
No. of misc. plankton/liter	22(0)	12(0)	4(0)	0	2(0)	0(0)	24(0)	0	14(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	-	-	-	-	-	-	-	-	-
B. comosum	-	-	-	-	-	-	-	-	-
B. varians	-	-	-	-	-	-	-	3.2	-
Cerataulina bergoni	-	-	-	-	-	-	5.7	2.5	13
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	70	24	-	-	-
C. peruvianus	-	-	-	-	-	-	-	-	-
C. affinis	-	-	-	-	-	-	7.2	2.5	-
C. compressus	-	-	-	-	-	-	-	17	-
C. curvisetus	-	-	-	-	-	-	-	6.9	-
C. decipiens	-	-	-	-	20	-	1.4	0.5	-
C. didymus	-	-	-	-	-	-	-	4.2	-
C. distans	-	64	-	-	-	-	-	6.7	-
C. diversus	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	-	-	-	-	-	1.0	-
Climacodium frauenfeldianum	5.7	-	-	-	-	-	-	0.7	-
Coscinodiscus excentricus	-	-	8.3	-	10	5.9	1.4	-	-
C. perforatus	-	4.5	42	67	-	41	-	-	-
C. radiatus	2.8	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	-	-	-	-	-	5.7	0.5	-
Guinardia flaccida	-	-	-	-	-	-	4.3	-	25
Hemiaulus haucki	-	-	-	-	-	-	-	2.0	-
Lauderia borealis	-	-	-	-	-	-	-	1.7	-
Leptocylindrus danicus	35	-	-	-	-	-	17	25	25
Nitzschia closterium	8.6	-	-	11	-	-	-	0.2	13
N. Delicatissima	-	4.5	-	-	-	-	8.6	0.7	19
N. seriata	-	-	-	-	-	-	-	4.2	-
Rhizosolenia alata f. gracillima	-	-	-	-	-	-	11	0.2	-
R. alata f. indica	-	-	-	-	-	-	2.9	-	-
R. bergoni	-	-	-	-	-	-	-	0.2	-
R. calcar avis	-	-	-	-	-	-	4.3	0.7	-
R. castracanei	-	-	-	-	-	-	-	-	-
R. hebetata f. semispina	-	-	-	-	-	-	7.3	0.7	-
R. imbricata	2.8	-	8.3	22	-	-	-	0.5	-
R. setigera	-	-	-	-	-	-	-	2.0	-
R. stolterfothi	-	-	-	-	-	-	4.3	2.2	6.2
R. styliformis	-	9.1	-	-	-	-	-	-	-
Skeletonema constatum	46	18	42	-	-	30	14	12	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-

Table C-8a1, continued

Station	G-4	G-5	G-6	G-7	H-1	H-2	H-3	H-4	H-5
Latitude (N)	32°00'	31°30'	31°00'	30°30'	34°00'	33°30'	33°00'	32°30'	32°00'
Longitude (E)	135°40'	135°40'	135°40'	135°40'	137°00'	137°00'	137°00'	137°00'	137°00'
Date	VIII-28	VIII-28	VIII-29	VIII-29	VIII-30	VIII-30	VIII-30	VIII-30	VIII-30
Time (GCT)	1345	1826	0025	0455	2151	1720	1238	0725	0249
Depth (m)	0	0	0	0	0	0	0	0	0
No. of total plankton/liter	38(0)	68(0)	94(0)	14(0)	47(1)	58(1)	26(2)	36(0)	42(0)
No. of Diatoms/liter	34(0)	50(0)	76(0)	6(0)	46(1)	45(1)	26(2)	24(0)	38(0)
No. of misc. plankton/liter	4(0)	18(0)	18(0)	8(0)	4(0)	13(1)	50(0)	12(0)	4(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	-	-	-	-	-	-	-	-	11
B. comosum	-	-	-	-	-	-	-	-	-
B. varians	-	-	-	-	6.1	8.0	0.4	-	-
Cerataulina bergoni	-	-	7.9	-	5.2	0.9	5.5	-	-
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	-	1.2	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. dadayi	-	12	-	-	2.6	2.7	-	-	16
C. peruvianus	-	-	-	33	0.8	-	0.4	-	-
C. affinis	-	-	-	-	-	-	6.3	-	-
C. compressus	-	-	-	-	-	-	9.4	-	42
C. curvisetus	-	-	-	-	-	-	-	-	-
C. decipiens	-	-	-	-	2.6	-	3.2	17	-
C. didymus	-	-	-	-	6.1	-	1.6	-	-
C. distans	-	-	-	-	-	-	-	-	-
C. diversus	-	-	-	-	-	30	-	-	-
C. lorenzianus	-	-	18	-	-	8.9	0.7	-	-
Climacodium frauenfeldianum	-	8.0	-	-	-	-	0.7	8.4	-
Coscinodiscus excentricus	12	4.0	7.9	-	-	-	-	-	-
C. perforatus	18	20	13	33	-	-	-	-	-
C. radiatus	-	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	4.0	2.6	-	1.7	0.9	3.2	-	-
Guinardia flaccida	-	-	-	-	-	-	-	-	-
Hemiaulus haucki	-	8.0	-	-	-	-	-	-	-
Lauderia borealis	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	12	-	7.9	-	48	35	47	-	-
Nitzschia closterium	5.8	-	5.3	-	-	-	0.7	-	-
N. delicatissima	5.8	-	5.3	-	0.8	4.1	1.6	17	-
N. seriata	-	-	-	-	6.1	-	4.7	-	-
Rhizosolenia alata f. gracillima	-	-	-	33	4.3	1.8	4.7	8.4	-
R. alata f. indica	-	-	-	-	-	0.4	-	-	5.2
R. bergoni	-	-	-	-	1.7	2.2	1.2	-	-
R. calcar avis	-	-	18	-	6.9	2.2	1.2	-	11
R. castracanei	-	-	-	-	-	-	-	8.4	-
R. hebetata f. semispina	-	-	5.3	-	-	0.4	0.4	-	-
R. imbricata	-	-	-	-	-	-	-	-	-
R. setigera	-	-	-	-	4.3	0.4	1.2	-	5.2
R. stolterfothi	-	-	7.9	-	0.8	-	0.4	-	-
R. styliformis	47	4.0	-	-	-	2.2	0.7	-	11
Skeletonema constatum	-	40	-	-	-	-	1.9	42	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-

Table C-8a1, continued

Station	H-6	H-7	H-8	U-1	U-2	U-3	U-4	U-5	U-6
Latitude (N)	31°30'	31°00'	30°30'	34°20'	34°00'	33°30'	33°00'	32°30'	32°00'
Longitude (E)	137°00'	137°00'	137°00'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'
Date	VIII-29	VIII-29	VIII-29	IX-3	IX-3	IX-3	IX-3	IX-3	IX-4
Time (GCT)	2215	1740	1339	0137	0455	0922	1640	2105	0147
Depth (m)	0	0	0	0	0	0	0	0	0
No. of total plankton/liter	12(0)	70(0)	32(0)	50(2)	74(0)	41(1)	15(1)	16(1)	20(0)
No. of Diatoms/liter	8(0)	66(0)	28(0)	50(2)	72(0)	27(1)	60(0)	12(1)	14(0)
No. of misc. plankton/liter	4(0)	4(0)	4(0)	0	2(0)	14(1)	92(0)	36(0)	6(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	-	-	-	0.6	-	-	-	-	-
B. comosum	-	-	-	-	-	-	-	4.8	-
B. varians	-	-	-	1.5	8.4	-	17	-	-
Cerataulina bergoni	-	-	-	2.5	-	1.5	-	-	-
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	5.2	30	-	-
C. peruvianus	-	-	-	0.3	-	0.7	-	-	-
C. affinis	-	-	-	-	-	-	-	3.3	-
C. compressus	-	-	-	6.8	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-
C. decipiens	-	-	-	4.5	-	-	-	3.3	-
C. didymus	-	-	-	6.3	-	-	-	3.3	-
C. distans	-	-	-	3.8	-	3.8	-	-	-
C. diversus	-	-	-	1.5	-	-	-	4.8	-
C. lorenzianus	-	-	-	1.5	-	16	13	13	-
Climacodium frauenfeldianum	-	73	100	-	5.5	3.8	-	-	-
Coscinodiscus excentricus	-	-	-	-	2.8	-	-	-	-
C. perforatus	-	-	-	-	-	-	-	1.6	-
C. radiatus	-	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	-	-	4.6	-	4.5	-	4.8	-
Guinardia flaccida	-	-	-	2.5	-	-	-	-	-
Hemiaulus haucki	-	-	-	0.3	-	1.5	-	-	-
Lauderia borealis	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	50	-	-	50	53	25	10	44	100
Nitzschia closterium	-	-	-	0.1	-	-	-	-	-
N. delicatissima	-	-	-	1.4	-	5.9	10	4.8	-
N. seriata	-	-	-	2.1	-	-	-	-	-
Rhizosolenia alata f. gracillima	50	-	-	0.1	11	11	10	4.8	-
R. alata f. indica	-	-	-	-	-	-	-	-	-
R. bergoni	-	-	-	0.6	2.8	1.5	-	-	-
R. calcar avis	-	-	-	0.6	8.4	7.5	6.7	-	-
R. castracanei	-	3.1	-	-	-	-	3.3	-	-
R. hebetata f. semispina	-	-	-	-	-	-	-	1.6	-
R. imbricata	-	-	-	-	-	-	-	-	-
R. setigera	-	-	-	1.1	-	-	-	-	-
R. stolterfothi	-	-	-	-	-	0.7	-	-	-
R. styliformis	-	24	-	0.1	8.4	1.5	-	1.6	-
Skeletonema constatum	-	-	-	3.5	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	0.6	-	3.8	-	3.3	-

Table C-8a1, continued

Station	BT-81	N-1	N-2	N-3	N-4	N-5	N-6	N-7	BT-83
Latitude (N)	31°00'	34°10'	33°40'	33°10'	32°37'	32°00'	31°32'	31°10'	30°40'
Longitude (E)	137°38'	138°15'	138°15'	138°15'	138°15'	138°15'	138°15'	138°15'	138°15'
Date	IX-4	IX-6	IX-5	IX-5	IX-5	IX-5	IX-4	IX-4	IX-4
Time (GCT)	0819	0225	2139	1609	0704	0107	2014	1546	1219
Depth (m)	0	0	0	0	0	0	0	0	0
No. of total plankton/liter	74(0)	56(0)	58(1)	26(0)	18(0)	50(0)	60(0)	62(0)	22(0)
No. of Diatoms/liter	48(0)	46(0)	55(1)	26(0)	18(0)	48(0)	54(0)	46(0)	12(0)
No. of misc. plankton/liter	26(0)	10(0)	28(0)	0	0	2(0)	6(0)	16(0)	10(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	-	-	0.7	-	11	-	-	-	-
B. comosum	8.3	-	-	-	-	-	-	-	-
B. varians	-	-	2.9	-	67	4.2	-	-	-
Cerataulina bergoni	-	-	5.1	7.7	-	-	-	-	-
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	8.4	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. dadayi	38	-	-	-	-	-	-	8.7	-
C. peruvianus	-	-	1.5	-	-	-	-	4.3	-
C. affinis	-	-	-	-	-	17	-	-	-
C. compressus	-	-	-	15	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-
C. decipiens	-	8.7	-	-	22	-	-	-	-
C. didymus	-	13	2.9	-	-	-	-	-	-
C. distans	-	-	-	15	-	-	-	-	-
C. diversus	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	5.8	-	-	-	-	-	-
Climacodium frauenfeldianum	-	52	0.7	-	-	-	74	70	-
Coscinodiscus excentricus	-	-	1.5	-	-	-	-	-	-
C. perforatus	-	-	1.5	-	-	-	-	-	-
C. radiatus	-	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	8.7	2.9	-	-	-	-	-	-
Guinardia flaccida	-	-	-	-	-	-	-	-	-
Hemiaulus haucki	-	-	-	-	-	-	-	-	-
Lauderia borealis	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	46	-	-	21	-	-	-
Nitzschia closterium	4.2	-	0.7	-	-	-	3.7	-	67
N. delicatissima	-	-	8.7	15	-	-	-	-	33
N. seriata	-	-	8.7	-	-	17	-	13	-
Rhizosolenia alata f. gracillima	13	8.7	2.9	-	-	-	-	-	-
R. alata f. indica	-	-	-	-	-	4.2	-	-	-
R. bergoni	-	-	2.2	-	-	-	-	-	-
R. calcar avis	-	-	-	-	-	-	-	-	-
R. castracanei	-	-	1.5	-	-	-	-	-	-
R. hebetata f. semispina	-	-	-	-	-	-	-	-	-
R. imbricata	-	-	-	-	-	-	-	-	-
R. setigera	-	-	2.2	-	-	-	-	-	-
R. stolterfothi	-	-	-	-	-	-	-	-	-
R. styliformis	4.2	4.3	-	-	-	-	-	-	-
Skeletonema constatum	33	-	2.2	46	-	29	22	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-

Table C-8a1, continued

Station	BT-28	BT-29	BT-30	BT-31	BT-32	BT-33	BT-34	BT-35	BT-37
Latitude (N)	31°35'	31°35'	31°35'	32°34'	32°14'	31°54'	31°34'	32°20'	32°59'
Longitude (E)	131°37'	132°00'	132°25'	133°00'	133°00'	133°00'	133°00'	135°00'	135°12'
Date	VIII-23	VIII-23	VIII-23	VIII-24	VIII-25	VIII-25	VIII-25	VIII-25	VIII-26
Time (GCT)	0930	1145	1355	2323	0205	0353	0600	1808	0015
Depth (m)	0	0	0	0	0	0	0	0	0
No. of total plankton/liter	52(1)	54(2)	22(0)	27(3)	76(0)	28(0)	14(0)	10(0)	46(2)
No. of Diatoms/liter	48(1)	54(2)	10(0)	27(3)	54(0)	28(0)	6(0)	6(0)	45(2)
No. of misc. plankton/liter	46(0)	0	12(0)	0	22(0)	0	8(0)	4(0)	40(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	-	0.4	-	1.8	-	-	-	-	13
B. comosum	1.3	-	-	-	-	-	-	-	-
B. varians	0.4	1.1	-	0.7	-	-	-	-	-
Cerataulina bergoni	5.1	3.1	-	8.6	-	14	-	-	14
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	0.1	19	21	-	-	-
C. dadayi	-	-	-	-	11	-	-	-	-
C. peruvianus	-	-	-	-	3.7	-	-	-	0.9
C. affinis	-	0.4	-	2.8	-	-		-	-
C. compressus	0.9	0.5	-	16	-	-	-	-	11
C. curvisetus	-	-	-	-	-	-	-	-	-
C. decipiens	1.7	0.4	-	-	-	-	-	-	1.8
C. didymus	-	0.4	-	1.3	-	-	-	-	3.5
C. distans	-	-	-	1.0	-	-	-	-	-
C. diversus	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	0.4	-	0.4	-	-	-	-	-
Climacodium frauenfeldianum	1.3	-	40	-	-	-	-	-	2.7
Coscinodiscus excentricus	-	-	-	-	-	-	-	-	-
C. perforatus	-	-	-	-	-	-	-	-	-
C. radiatus	-	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	1.5	-	1.2	-	-	-	33	7.1
Guinardia flaccida	-	1.2	-	1.2	-	-	-	-	-
Hemiaulus haucki	-	-	-	0.1	-	-	-	-	-
Lauderia borealis	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	65	80	40	38	-	57	100	-	6.2
Nitzschia closterium	-	-	-	2.3	11	-	-	-	-
N. delicatissima	1.7	0.2	-	0.3	11	-	-	-	2.6
N. seriata	9.2	2.0	-	12	-	-	-	-	17
Rhizosolenia alata f. gracillima	7.6	0.9	-	0.1	-	-	-	-	-
R. alata f. indica	-	-	-	-	-	-	-	-	-
R. bergoni	0.8	-	-	-	-	-	-	-	1.8
R. calcar avis	2.5	0.2	-	0.1	3.7	7.2	-	-	0.9
R. castracanei	-	-	20	-	-	-	-	-	-
R. hebetata f. semispina	-	0.2	-	-	-	-	-	-	-
R. imbricata	-	-	-	-	-	-	-	-	-
R. setigera	0.8	2.4	-	2.4	3.7	-	-	-	8.8
R. stolterfothi	-	0.7	-	0.1	-	-	-	-	-
R. styliformis	0.4	0.7	-	-	-	-	-	67	-
Skeletonema constatum	-	2.8	-	4.9	37	-	-	-	-
Thalassionema nitzschioides	0.9	-	-	2.8	-	-	-	-	7.1

Table C-8a1, continued

Station	BT-38	94	95	S-1	S-2	S-3	S-4	S-5
Latitude (N)	38°20'	33°54'	33°48'	33°14'	33°10'	33°04'	32°59'	32°43'
Longitude (E)	135°00'	136°31'	136°29'	133°25'	133°32'	133°36'	133°41'	133°50'
Date	VIII-26	IX-13	IX-13	VIII-17	VIII-17	VIII-17	VIII-17	VIII-17
Time (GCT)	0215	0320	0400	1533	1224	0710	0412	0032
Depth (m)	0	0	0	0	0	0	0	0
No. of total plankton/liter	29(1)	14(2)	40(1)	39(1)	32(1)	99(1)	90(0)	74(0)
No. of Diatoms/liter	26(1)	14(2)	39(1)	37(1)	29(1)	98(1)	86(0)	74(0)
No. of misc. plankton/liter	28(0)	0	4(0)	26(0)	24(0)	8(0)	4(0)	0
Diatoms (per cent)	100	100	100	100	100	100	100	100
Bacteriastrum elongatum	2.3	0.1	2.1	0.5	2.0	2.2	-	-
B. comosum	-	0.1	-	-	-	0.4	-	-
B. varians	-	0.7	7.1	-	2.8	-	-	-
Cerataulina bergoni	3.0	-	1.5	2.2	6.8	1.0	-	5.4
Chaetoceros atlanticus v. neapolitana	-	-	-	-	-	-	-	-
C. coarctatus	-	-	0.5	-	-	-	-	-
C. dadayi	-	-	-	1.1	-	-	-	-
C. peruvianus	-	0.0	2.6	-	0.7	0.2	2.3	-
C. affinis	-	0.1	-	-	-	-	-	-
C. compressus	4.6	96	9.7	1.1	3.4	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-
C. decipiens	-	-	-	1.6	-	3.3	-	-
C. didymus	-	1.1	7.1	-	2.0	12	9.3	-
C. distans	-	0.7	1.0	-	3.4	2.6	-	-
C. diversus	-	0.2	17	-	2.0	0.6	-	-
C. lorenzianus	-		-	8.8	5.4	1.6	-	-
Climacodium frauenfeldianum	-	0.1	6.2	-	-	1.6	-	2.7
Coscinodiscus excentricus	-	-	-	-	-	-	-	-
C. perforatus	-	-	-	-	-	-	-	-
C. radiatus	-	-	-	-	-	-	-	22
Dactyliosolen mediterraneus	5.3	0.0	4.1	0.5	15	3.7	7.0	2.7
Guinardia flaccida	0.8	-	-	-	-	0.8	-	-
Hemiaulus haucki	-	-	1.0	-	-	-	-	-
Lauderia borealis	-	-	-	-	-	0.4	-	-
Leptocylindrus danicus	56	0.1	23	66	25	36	9.3	19
Nitzschia closterium	-	-	-	0.5	-	-	-	-
N. delicatissima	0.8	0.0	2.1	-	0.7	1.0	2.3	2.7
N. seriata	-	-	1.5	1.1	4.1	12	-	-
Rhizosolenia alata f. gracillima	5.3	-	2.6	2.7	6.8	5.1	23	19
R. alata f. indica	3.8	-	-	-	-	-	2.3	-
R. bergoni	3.0	-	2.1	-	2.8	1.8	-	5.4
R. calcar avis	3.8	-	-	1.6	6.1	4.0	23	19
R. castracanei	-	-	-	-	-	-	-	-
R. hebetata f. semispina	-	-	-	-	-	-	-	-
R. imbricata	-	-	-	-	-	-	2.3	-
R. setigera	2.3	-	3.0	0.5	2.0	1.6	7.0	2.7
R. stolterfothi	6.1	-	-	4.4	4.8	2.6	-	-
R. styliformis	0.8	-	-	2.2	-	0.6	-	-
Skeletonema constatum	-	-	2.6	1.6	-	2.8	-	-
Thalassionema nitzschioides	-	-	2.1	3.3	1.4	-	4.7	-

a) Identified by F. Uyeno.

b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

TABLE C-8a2. Less abundant diatoms (less than 5% at any station) taken in surface water samples (500 ml) at Shumpu Maru (KMO) stations.

Asterionella japonica	I1, G2
Biddulphia longicornis	U1
Chaetoceros eibenii	I1, H3, BT29, S3
C. pendulus	K1, U5, N7, 94
C. saltans	H2, 95
C. brevis	I2, K1, H1, 3, U1, BT31, 37
C. messanensis	U1, S3
C. subsecundus	BT31, 94
Corethron hystrix	I1, 2, G2
Coscinodiscus oculus iridis	I8
Ditylum brightwelli	N1, S3
Eucampia cornuta	G2, H3, U1, BT29, S1-3
Rhizosolenia cylindrus	G1, 2, U1, BT38, S4
R. delicatula	U3
Stephanopyxis palmeriana	K1, 95
Thalassiothrix frauenfeldi	U1, 3, BT31, S4

TABLE C-8b1. More abundant diatoms by per cent taken in spaced water samples (500 ml) between 25 and 150 meters at Shumpu Maru (KMO) stations.

Station	K-8	K-8	K-8	K-8	G-4	G-4	G-4	G-4	U-1	U-1	U-1
Latitude (N)	29°40'	29°40'	29°40'	29°40'	32°00'	32°00'	32°00'	32°00'	34°20'	34°20'	33°20'
Longitude (E)	134°10'	134°10'	134°10'	134°10'	135°40'	135°40'	135°40'	135°40'	137°38'	137°38'	137°38'
Date	VIII-20	VIII-21	VIII-20	VIII-20	VIII-28	VIII-28	VIII-28	VIII-28	IX-3	IX-3	IX-3
Time (GCT)	1611	1611	1611	1611	1342	1342	1342	1355	0141	0141	0141
Depth (m)	25	25	100	150	25	50	100	170	25	50	100
No. of total plankton/liter[a)]	27(0)	14(1)	17(1)	52(0)	12(1)	36(0)	99(0)	78(0)	85(2)	51(2)	56(1)
No. of Diatoms/liter[a)]	24(0)	14(1)	15(1)	50(0)	96(0)	36(0)	96(0)	76(0)	84(2)	50(2)	55(1)
No. of misc. plankton/liter[a)]	3(0)	0	12(0)	2(0)	24(0)	0	3(0)	2(0)	13(1)	20(0)	10(0)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	0.2	-	-
Bacteriastrum elongatum	-	-	14	-	13	-	22	-	2.6	1.6	9.1
B. comosum	-	-	-	-	-	-	3.1	-	1.0	-	5.5
B. varians	-	13	-	-	-	-	6.3	-	6.1	4.2	16
Cerataulina bergoni	-	-	14	-	3.1	-	-	-	0.5	0.2	-
Chaetoceros at. v. neapolitana	-	-	-	-	-	-	-	-	-	13	1.8
C. coarctatus	-	-	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	9.4	-	-	-	0.4	-	-
C. eibeni	-	-	-	-	-	-	-	-	-	0.6	-
C. peruvianus	-	-	-	-	-	-	-	-	0.5	-	-
C. affinis	-	-	20	8.0	-	-	9.4	21	1.5	2.0	-
C. compressus	-	-	16	-	-	100	19	37	6.1	1.9	-
C. curvisetus	-	-	-	-	-	-	-	-	0.6	24	26
C. decipiens	-	-	-	-	-	-	-	-	0.2	2.7	-
C. didymus	-	-	-	-	3.1	-	-	-	1.5	1.4	3.6
C. distans	62	-	-	-	13	-	-	-	3.3	2.6	-
C. lorenzianus	-	-	-	-	-	-	-	-	-	2.4	9.1
C. messanensis	-	-	-	-	-	-	-	-	-	4.7	-
C. subsecundus	-	-	-	-	-	-	-	-	-	4.6	-
Climacodium frauenfeldianum	-	-	-	-	-	-	-	-	-	1.2	-
Coscinodiscus perforatus	-	-	-	12	16	-	-	-	0.8	-	-
C. sp	-	-	-	-	-	-	-	-	-	-	-
Dactyliosolen mediterraneus	-	76	7.9	-	-	-	6.3	5.3	3.8	1.2	7.3
Eucampia zoodiacus	-	-	-	-	-	-	-	-	-	0.4	-
Guinardia flaccida	-	2.2	-	-	-	-	-	-	15	1.9	5.5
Hemiaulus haucki	-	-	-	4.0	-	-	16	-	-	0.6	-
Leptocylindrus danicus	-	4.5	20	44	22	-	6.3	32	31	2.4	1.8
Nitzschia delicatissima	-	-	-	-	13	-	-	-	0.5	1.0	1.8
N. seriata	-	-	7.9	8.0	-	-	6.3	-	4.4	9.1	-
Rhizosolenia alata f. gracillima	-	-	2.0	20	-	-	-	-	0.6	-	1.8
R. alata f. indica	-	-	-	-	6.3	-	-	-	0.2	0.4	-
R. bergoni	-	-	-	-	-	-	-	-	1.0	0.2	1.8
R. calcar avis	13	-	-	-	-	-	-	-	0.6	-	-
R. setigera	13	-	-	4.0	3.1	-	-	2.6	1.5	-	1.8
R. stolterfothi	-	-	-	-	-	-	-	-	1.0	3.0	1.8
R. styliformis	13	4.5	-	-	-	-	-	-	0.6	-	-
Skeletonema costatum	-	-	-	-	-	-	-	-	-	-	-
Stephanopyxis palmeriana	-	-	-	-	-	-	-	-	-	1.2	-
Thalassionema nitzschioides	-	-	-	-	-	-	6.3	-	5.7	3.2	-
Thalassiothrix frauenfeldi	-	-	-	-	-	-	-	-	1.2	1.2	-

Table C-8b1, continued

Station	U-1	U-2	U-2	U-2	U-2	U-3	U-3	U-3	U-3	U-4	U-4
Latitude (N)	34°20'	34°00'	34°00'	34°00'	34°00'	33°30'	33°30'	33°30'	33°30'	33°00'	33°00'
Longitude (E)	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38
Date	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3
Time (GCT)	0141	0450	0450	0450	0450	0917	0917	0917	0902	1645	1645
Depth (m)	150	28	53	78	103	25	50	100	150	25	50
No. of total plankton/liter	17(1)	30(1)	53(1)	55(1)	92(1)	23(1)	19(2)	29(1)	18(1)	96(0)	13(2)
No. of Diatomaceae/liter	17(1)	28(1)	49(1)	55(1)	92(1)	19(1)	19(2)	29(1)	17(1)	28(0)	12(2)
No. of misc. plankton/liter	4(0)	22(0)	40(0)	6(0)	8(0)	34(0)	32(0)	0	4(0)	68(0)	50(0)
Percentage of total Diatomaceae	100	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	1.4	0.4	-	3.8	-	26	7.2	-
Bacteriastrum elongatum	15	-	-	-	-	7.3	-	-	-	-	-
B. comosum	-	-	1.6	1.4	-	4.2	-	-	-	-	-
B. varians	24	-	-	7.7	-	-	0.3	-	-	-	0.3
Cerataulina bergoni	-	-	-	-	0.4	-	0.2	-	-	-	2.1
Chaetoceros at. v. neapolitana	-	-	6.2	5.3	4.4	-	1.2	-	-	-	4.5
C. coarctatus	-	-	1.2	-	1.7	2.1	0.5	2.1	-	-	-
C. dadayi	-	4.3	1.2	-	-	-	0.3	-	-	-	-
C. eibeni	-	-	2.1	-	-	-	1.1	-	-	7.2	0.3
C. peruvianus	-	0.7	-	-	-	1.0	0.1	-	-	14	0.2
C. affinis	-	-	-	1.1	6.6	-	0.7	-	2.3	-	1.1
C. compressus	7.4	-	-	3.6	-	4.2	1.9	20	-	-	2.7
C. curvisetus	-	-	-	4.4	-	-	-	-	-	-	-
C. decipiens	8.4	1.4	-	-	2.6	-	0.5	-	-	-	1.1
C. didymus	-	3.6	0.8	0.7	-	-	-	-	9.3	-	-
C. distans	-	-	-	2.9	0.9	-	-	-	-	-	1.4
C. lorenzianus	-	7.1	0.8	-	0.9	6.3	-	-	-	-	0.8
C. messanensis	8.4	-	2.5	9.9	-	-	3.6	7.1	-	-	-
C. subsecundus	-	-	-	5.3	-	-	-	-	-	-	-
Climacodium frauenfeldianum	-	2.2	0.4	-	-	-	2.6	-	-	29	-
Coscinodiscus perforatus	-	0.7	-	0.4	15	-	-	1.0	1.2	-	-
C. sp	-	0.7	-	-	13	-	0.2	-	-	-	0.2
Dactyliosolen mediterraneus	2.4	0.7	0.8	2.6	11	-	0.2	8.2	9.3	14	0.5
Eucampia zoodiacus	-	-	10	0.7	0.4	-	0.3	1.0	2.3	-	0.2
Guinardia flaccida	4.8	-	-	0.4	6.9	-	1.1	-	3.5	-	-
Hemiaulus haucki	-	-	0.8	-	-	-	1.4	-	-	-	1.1
Leptocylindrus danicus	7.4	62	1.6	3.6	2.6	18	1.2	8.2	-	-	3.3
Nitzschia delicatissima	1.2	-	5.7	-	2.2	28	5.6	1.0	3.5	-	29
N. seriata	-	6.4	2.5	1.4	1.3	-	2.1	2.1	-	-	6.4
Rhizosolenia alata f. gracillima	1.2	-	0.4	-	-	1.0	0.4	1.0	-	-	0.2
R. alata f. indica	-	-	-	0.4	0.4	1.0	-	-	-	-	0.5
R. bergoni	1.2	1.4	0.4	0.4	0.9	13	1.6	1.0	-	-	31
R. calcar avis	-	-	-	-	0.4	-	0.1	-	-	22	0.5
R. setigera	1.2	1.4	-	0.7	2.2	1.0	0.1	-	1.2	7.2	-
R. stolterfothi	-	-	1.6	5.3	3.0	2.1	1.6	-	2.3	-	3.7
R. styliformis	1.2	0.7	1.2	1.1	0.4	-	0.1	-	-	-	1.0
Skeletonema costatum	12	-	-	-	2.2	4.2	0.7	-	7.0	-	-
Stephanopyxis palmeriana	-	-	12	-	0.9	-	1.3	1.0	2.3	-	-
Thalassionema nitzschioides	1.4	-	41	33	6.9	2.1	64	38	24	-	6.2
Thalassiothrix frauenfeldi	-	-	2.5	2.2	-	-	-	7.1	-	-	0.3

Table C-8b1, continued

Station	U-4	U-4	U-5	U-5	U-5	U-5	U-5	U-6	U-6	U-6
Latitude (N)	33°00'	33°00'	32°30'	32°30'	32°30'	32°30'	32°00'	32°00'	32°00'	32°00'
Longitude (E)	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'	137°38'
Date	IX-3	IX-3	IX-3	IX-3	IX-3	IX-3	IX-4	IX-4	IX-4	IX-4
Time (GCT)	1645	1645	2059	2059	2059	2059	0142	0142	0142	0142
Depth (m)	100	150	25	50	100	150	25	50	100	150
No. of total plankton/liter	29(1)	18(1)	10(2)	16(2)	37(1)	64(1)	16(0)	24(0)	17(1)	40(0)
No. of Diatomaceae/liter	28(1)	17(1)	10(2)	16(2)	36(1)	61(1)	8(0)	12(0)	16(1)	34(0)
No. of misc. plankton/liter	12(0)	4(0)	18(0)	8(0)	12(0)	36(0)	8(0)	12(0)	16(0)	6(0)
Percentage of total Diatomaceae	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	9.2	-	-	-	-	-	-	-	-
Bacteriastrum elongatum	2.2	-	1.4	-	-	-	-	-	-	-
B. comosum	-	-	-	0.2	-	-	-	-	-	-
B. varians	-	-	-	4.8	0.5	-	-	-	-	-
Cerataulina bergoni	-	-	1.6	1.0	1.1	-	-	-	-	-
Chaetoceros at. v. neapolitana	5.8	4.6	-	4.0	9.9	17	-	-	28	-
C. coarctatus	0.7	-	-	-	-	-	-	-	-	-
C. dadayi	-	-	-	-	-	-	-	50	-	-
C. eibeni	3.6	-	-	-	-	-	-	-	-	-
C. peruvianus	-	-	0.2	-	-	-	-	-	-	-
C. affinis	-	3.5	-	0.4	2.8	-	-	-	-	-
C. compressus	-	-	15	7.6	7.2	-	-	-	-	24
C. curvisetus	-	9.2	0.4	14	9.4	3.3	-	-	-	-
C. decipiens	-	4.6	2.5	0.5	1.1	4.0	-	-	2.5	-
C. didymus	-	2.3	22	1.0	4.4	1.9	-	-	-	-
C. distans	5.1	-	6.5	0.7	-	-	-	-	-	-
C. lorenzianus	-	-	3.3	2.7	6.6	2.6	-	-	8.8	-
C. messanensis	1.5	-	-	5.4	-	-	-	-	-	-
C. subsecundus	-	-	-	0.7	9.9	-	-	-	-	-
Climacodium frauenfeldianum	-	1.2	0.2	15	-	1.9	-	-	-	-
Coscinodiscus perforatus	-	-	-	3.5	-	-	-	-	-	-
C. sp	-	-	-	2.5	0.5	1.3	-	-	-	-
Dactyliosolen mediterraneus	8.7	10	2.6	-	1.7	1.3	-	-	1.3	5.9
Eucampia zoodiacus	0.7	-	-	1.0	3.3	0.7	-	-	-	-
Guinardia flaccida	3.6	-	-	-	-	0.7	-	-	6.3	-
Hemiaulus haucki	-	-	-	0.5	-	0.7	-	-	-	-
Leptocylindrus danicus	1.5	2.3	14	4.4	4.8	-	25	17	3.8	-
Nitzschia delicatissima	2.9	2.3	-	2.5	3.3	4.6	-	-	-	12
N. seriata	10	-	3.9	7.4	4.8	1.3	-	-	7.6	-
Rhizosolenia alata f. gracillima	0.7	2.3	0.8	0.2	-	-	25	-	2.5	-
R. alata f. indica	0.7	-	-	-	-	-	-	-	-	-
R. bergoni	0.7	-	-	1.0	2.8	4.6	-	-	-	-
R. calcar avis	0.7	-	0.2	-	-	-	-	-	-	-
R. setigera	-	-	1.2	0.5	2.8	-	-	17	2.5	5.9
R. stolterfothi	0.7	4.6	3.2	4.0	7.8	-	-	-	19	5.9
R. styliformis	-	4.6	1.4	-	2.2	1.9	-	-	2.5	-
Skeletonema costatum	-	-	10	7.2	-	1.3	-	-	-	-
Stephanopyxis palmeriana	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	50	37	3.7	1.5	13	39	50	17	14	47
Thalassiothrix frauenfeldi	-	-	0.4	-	-	1.3	-	-	-	-

a) Number in parentheses indicates power of 10 by which the first number should be multiplied.

TABLE C-8b2. Less abundant diatoms (less than 5% at any station) taken in spaced water samples (500 ml) between 25 and 150 meters at Shumpu Maru (KMO) stations.

Biddulphia longiruris	U3
Chaetoceros pendulus	U1, 3
C. saltans	U1, 2
C. affinis v. willei	U1, 4
C. brevis	U1, 2, 5
C. diversus	U1, 5
Corethron hystrix	U1-3, 5, 6
Coscinodiscus excentricus	U1-3, 5
C. oculus iridis	U2, 3
Ditylum brightwelli	U2, 3, 5
Eucampia cornuta	U1, 2, 5
Lauderia borealis	U1-5
Rhizosolenia cylindrus	U1, 2, 5
R. delicatula	U2, 3
R. imbricata	G4, U1, 2, 5
R. robusta	U2

TABLE C-9a. More abundant diatoms by per cent taken in surface, 50- and 100-meter water samples (330 ml) at Yushio Maru stations. a)

Station	B25	B26	B27	B28	1001	B30	1002	B32	1003	1003
Latitude (N)	41°46'	41°42'	41°41'	41°39'	41°30'	41°34'	41°36'	41°33'	41°30'	41°30'
Longitude (E)	141°14'	141°23'	141°28'	141°40'	142°00'	142°36'	143°00'	143°24'	144°00'	144°00'
Date	VIII-11	VIII-11	VIII-11	VIII-11	VIII-11	VIII-11	VIII-11	VIII-11	VIII-12	VIII-12
Time (GCT)	0740	0840	0940	1125	1320	1745	1945	2350	0405	0405
Depth (m)	0	0	0	0	0	0	0	0	0	50
No. of Diatoms/liter b)	73(2)	77(3)	57(3)	60(4)	50(3)	32(4)	21(3)	42(1)	48(0)	96(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	1.3	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	25	7.8
Bacteriastrum delicatulum	24	9.7	6.3	12	1.8	3.8	1.7	-	-	-
Chaetoceros (total)	44	71	73	83	79	71	84	70	50	17
Subgenus Phaeoceros (total)	-	-	0.5	2.5	0.4	1.3	-	51	50	17
C. atlanticus	-	-	-	-	-	-	-	-	-	7.8
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. concavicornis	-	-	-	-	-	-	-	-	-	4.7
C. convolutus	-	-	-	-	-	-	-	51	50	3.1
C. peruvianus	-	-	-	-	0.4	-	-	0.7	-	-
C. tetrastichon	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	44	71	73	81	78	70	84	19	-	-
C. affinis	-	-	-	-	10	0.3	12	-	-	-
C. compressus	9.5	14	13	23	17	27	12	4.3	-	-
C. curvisetus	7.0	17	28	15	20	18	12	6.4	-	-
C. debilis	-	-	-	-	0.5	-	-	-	-	-
C. decipiens	-	-	-	-	0.9	-	1.5	-	-	-
C. didymus	14	47	16	8.0	13	7.0	25	-	-	-
C. distans	7.0	11	2.6	19	0.5	7.6	1.5	7.9	-	-
C. lorenzianus	1.6	-	-	-	2.4	0.3	-	-	-	-
C. nipponica	-	-	-	-	-	-	-	-	-	-
C. radicans	2.1	22	5.2	-	7.2	2.5	20	-	-	-
C. spp (misc. Hyalochaete)	2.1	0.8	-	8.0	3.6	1.0	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	-	-	-	-	0.7	-	13
Coscinodiscus marginatus	-	-	-	-	-	-	-	-	25	-
Dactyliosolen antarcticus	-	0.4	-	-	-	0.6	-	-	-	4.7
Denticula sp	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	1.0	1.8	-	2.6	-	-	-
L. minimus	1.6	0.8	2.1	1.0	-	4.1	-	-	-	-
Navicula sp	1.2	0.8	-	-	-	-	-	-	-	-
Nitzschia longissima	-	-	-	0.5	-	-	-	-	-	20
N. seriata	-	-	-	2.0	1.8	3.5	-	0.7	-	36
Rhizosolenia (total)	25	5.0	4.2	-	5.8	2.9	3.8	15	-	1.6
R. alata f. gracillima	-	-	-	-	-	1.0	0.3	-	-	-
R. alata f. inermis	-	-	-	-	-	-	0.3	-	-	-
R. bergoni	3.3	0.8	-	-	-	0.3	-	-	-	-
R. calcar avis	20	3.5	3.7	-	-	1.3	-	-	-	-
R. hebetata f. semispina	-	-	-	-	1.2	-	0.6	2.9	-	1.6
R. setigera	-	-	0.5	-	0.5	-	1.2	-	-	-
R. stolterfothi	-	-	-	-	0.2	-	-	-	-	-
Skeletonema costatum	-	7.0	13	-	1.8	9.8	1.5	4.3	-	-
Thalassionema nitzschioides	0.8	-	-	-	-	-	0.6	2.9	-	-
Thalassiothrix longissima	-	0.4	0.5	-	-	-	-	0.7	-	-

a) Identified by Y. Kawarada and M. Ohwada.

b) Number in parentheses indicates power of 10 by which the first number should be multiplied.

Table C-9a, continued

Station	1003	B34	1004	1004	1004	B36	1005	B38	1006	1006
Latitude (N)	41°30'	41°29'	41°28'	41°28'	41°28'	41°27'	41°27'	41°26'	41°14'	41°14'
Longitude (E)	144°00'	144°30'	145°02'	145°02'	145°02'	145°28'	145°50'	146°18'	146°50'	146°50'
Date	VIII-12	VIII-12	VIII-12	VIII-12	VIII-12	VIII-12	VIII-12	VIII-13	VIII-13	VIII-13
Time (GCT)	0405	0850	1200	1200	1200	1750	2210	0247	0710	0710
Depth (m)	100	0	0	50	100	0	0	0	0	50
No. of Diatoms/liter	17(1)	25(3)	53(2)	17(2)	45(0)	15(3)	29(2)	85(2)	11(2)	15(2)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	2.6	-
Bacteriastrum delicatulum	-	7.9	-	-	-	-	-	-	-	-
Chaetoceros (total)	63	64	28	7.3	33	43	17	56	50	6.0
Subgenus Phaeoceros (total)	63	29	17	7.3	33	13	7.2	17	24	6.0
C. atlanticus	27	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-	-
C. concavicornis	-	-	-	-	-	-	-	2.1	13	-
C. convolutus	36	22	17	7.3	33	6.6	3.1	8.5	-	6.0
C. peruvianus	-	7.1	-	-	-	4.6	4.1	3.5	11	-
C. tetrastichon	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	35	11	-	-	30	10	39	26	-
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	4.0	-	-	-	-	-	5.3	-	-
C. curvisetus	-	-	2.8	-	-	-	-	-	-	-
C. debilis	-	-	-	-	-	-	-	-	-	-
C. decipiens	-	-	-	-	-	-	1.0	-	-	-
C. didymus	-	-	-	-	-	6.0	4.1	-	-	-
C. distans	-	22	-	-	-	7.3	-	6.4	-	-
C. lorenzianus	-	1.6	8.5	-	-	13	5.2	28	26	-
C. nipponica	-	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	7.9	-	-	-	4.0	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	14	-	-	-	-	-	2.0
Coscinodiscus marginatus	-	-	1.1	-	-	-	1.0	-	2.6	-
Dactyliosolen antarcticus	-	-	-	4.5	-	-	-	-	-	-
Denticula sp	-	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	-	1.6	-	-	-	-	-	-	-	-
Nitzschia longissima	-	0.8	-	6.4	-	-	-	6.0	-	1.0
N. seriata	-	-	-	64	-	4.6	-	0.7	11	55
Rhizosolenia (total)	27	21	68	3.6	67	49	80	20	34	8.9
R. alata f. gracillima	-	4.0	5.1	-	-	11	19	3.2	16	2.0
R. alata f. inermis	-	-	-	-	-	-	-	-	-	-
R. bergoni	-	9.5	56	-	-	11	21	3.2	13	-
R. calcar avis	-	4.0	-	-	-	25	5.2	12	-	1.0
R. hebetata f. semispina	27	-	3.9	1.8	67	-	28	-	5.3	3.0
R. setigera	-	-	1.1	-	-	-	6.2	-	-	2.0
R. stolterfothi	-	-	-	-	-	-	-	-	-	-
Skeletonema costatum	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-	7.9
Thalassiothrix longissima	-	2.4	1.7	-	-	1.3	-	13	-	2.0

Table C-9a, continued

Station	1006	B40	1007	1007	1007	1008	1008	1008	B44
Latitude (N)	41°14'	41°32'	41°42'	41°42'	41°42'	42°03'	42°03'	42°03'	42°17'
Longitude (E)	146°50'	146°12'	145°56'	145°56'	145°56'	145°13'	145°13'	145°13'	144°47'
Date	VIII-13	VIII-13	VIII-13	VIII-13	VIII-13	VIII-14	VIII-14	VIII-14	VIII-14
Time (GCT)	0710	1500	1805	1805	1805	0130	0130	0130	0550
Depth (m)	100	0	0	50	100	0	50	100	0
No. of Diatoms/liter	11(1)	10(3)	11(2)	29(2)	21(1)	17(2)	17(2)	11(1)	13(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	3.4	-	-
Bacteriastrum delicatulum	-	1.5	-	-	-	-	-	-	-
Chaetoceros (total)	29	35	21	28	29	31	4.3	14	2.4
Subgenus Phaeoceros (total)	29	2.9	2.8	12	29	12	4.3	14	2.4
C. atlanticus	-	-	-	3.1	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. concavicornis	-	0.6	2.8	-	-	5.4	-	-	-
C. convolutus	29	0.6	-	9.2	29	-	4.3	14	2.4
C. peruvianus	-	1.8	-	-	-	6.2	-	-	-
C. tetrastichon	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	-	33	18	15	-	20	-	-	-
C. affinis	-	-	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	-
C. curvisetus	-	0.9	-	-	-	-	-	-	-
C. debilis	-	-	-	5.1	-	-	-	-	-
C. decipiens	-	-	2.8	10	-	-	-	-	-
C. didymus	-	10	13	-	-	1.8	-	-	-
C. distans	-	4.7	-	-	-	-	-	-	-
C. lorenzianus	-	14	2.8	-	-	18	-	-	-
C. nipponica	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	2.6	-	-	-	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	-	-	-	1.7	29	21
Coscinodiscus marginatus	-	-	2.8	-	-	0.9	-	-	-
Dactyliosolen antarcticus	14	-	-	-	7.2	-	-	29	-
Denticula sp	-	-	-	-	21	-	-	-	-
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-
L. minimus	-	2.9	-	-	-	-	-	-	-
Navicula sp	-	-	-	-	-	-	-	-	-
Nitzschia longissima	-	-	-	-	7.2	2.7	13	-	-
N. seriata	-	4.1	-	10	14	4.5	73	29	-
Rhizosolenia (total)	14	53	72	41	-	61	3.5	-	52
R. alata f. gracillima	-	6.7	18	19	-	13	1.7	-	-
R. alata f. inermis	-	-	-	-	-	3.6	-	-	-
R. bergoni	-	2.1	15	-	-	21	-	-	-
R. calcar avis	-	39	5.5	-	-	18	-	-	48
R. hebetata f. semispina	14	-	33	2.0	-	4.5	1.7	-	-
R. setigera	-	0.6	-	-	-	-	-	-	2.4
R. stolterfothi	-	-	-	7.1	-	-	-	-	-
Skeletonema costatum	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	4.8
Thalassiothrix longissima	-	2.6	-	15	7.2	0.9	0.9	-	17

Table C-9a, continued

Station	1009	1009	1009	1010	1010	1010	B47	1011	1011
Latitude (N)	42°32'	42°32'	42°32'	42°30'	42°30'	42°30'	42°15'	42°00'	42°00'
Longitude (E)	144°35'	144°35'	144°35'	144°00'	144°00'	144°00'	144°00'	144°02'	144°02'
Date	VIII-14	VIII-14	VIII-14	VIII-17	VIII-17	VIII-17	VIII-17	VIII-17	VIII-17
Time (GCT)	0802	0802	0802	0630	0630	0630	0905	1100	1100
Depth (m)	0	50	100	0	50	100	0	0	100
No. of Diatoms/liter	18(4)	33(1)	67(1)	12(3)	29(1)	82(1)	11(1)	60(0)	32(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	1.9
Bacteriastrum delicatulum	0.2	-	-	-	-	-	-	-	-
Chaetoceros (total)	98	18	55	-	11	39	-	-	40
Subgenus Phaeoceros (total)	-	-	55	-	-	39	-	-	11
C. atlanticus	-	-	16	-	-	19	-	-	3.8
C. coarctatus	-	-	-	-	-	-	-	-	-
C. concavicornis	-	-	22	-	-	12	-	-	-
C. convolutus	-	-	16	-	-	6.6	-	-	7.5
C. peruvianus	-	-	-	-	-	-	-	-	-
C. tetrastichon	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	98	18	-	-	11	-	-	-	28
C. affinis	0.1	-	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	28
C. curvisetus	-	-	-	-	-	-	-	-	-
C. debilis	97	-	-	-	-	-	-	-	-
C. decipiens	0.6	-	-	-	11	-	-	-	-
C. didymus	-	-	-	-	-	-	-	-	-
C. distans	-	-	-	-	-	-	-	-	-
C. lorenzianus	-	-	-	-	-	-	-	-	-
C. nipponica	-	18	-	-	-	-	-	-	-
C. radicans	0.5	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-
Corethron hystrix	0.2	-	-	-	-	1.1	2.8	25	17
Coscinodiscus marginatus	0.0	-	-	-	-	-	-	-	-
Dactyliosolen antarcticus	-	-	-	-	-	-	-	-	3.8
Denticula sp	-	14	27	-	-	28	-	-	3.8
Leptocylindrus danicus	-	-	-	-	-	-	-	-	7.5
L. minimus	-	-	-	-	-	-	-	-	-
Navicula sp	-	-	-	-	-	-	-	-	-
Nitzschia longissima	-	4.5	-	-	16	1.1	-	75	-
N. seriata	0.3	18	-	-	-	5.5	-	-	3.0
Rhizosolenia (total)	0.5	14	14	-	26	17	-	-	13
R. alata f. gracillima	-	-	-	-	-	-	-	-	2.5
R. alata f. inermis	-	-	-	-	-	-	-	-	-
R. bergoni	-	-	-	-	-	-	-	-	-
R. calcar avis	-	-	-	-	-	-	-	-	5.7
R. hebetata f. semispina	-	-	14	-	-	14	-	-	-
R. setigera	-	-	-	-	-	-	-	-	-
R. stolterfothi	-	14	-	-	26	-	-	-	-
Skeletonema costatum	-	-	-	100	-	-	94	-	-
Thalassionema nitzschioides	-	-	-	-	47	2.2	-	-	7.5
Thalassiothrix longissima	-	-	4.5	-	-	7.7	-	-	-

Table C-9a, continued

Station	B49	B50	1012	1012	1012	B53	1013	1013	1013
Latitude (N)	41°40'	41°16'	40°59'	40°59'	40°59'	40°22'	40°00'	40°00'	40°00'
Longitude (E)	144°00'	144°00'	144°03'	144°03'	144°03'	144°02'	144°05'	144°05'	144°05'
Date	VIII-17	VIII-17	VIII-17	VIII-17	VIII-17	VIII-18	VIII-18	VIII-18	VIII-18
Time (GCT)	1450	1805	2005	2005	2005	0250	0600	0600	0600
Depth (m)	0	0	0	50	100	0	0	50	100
No. of Diatoms/liter	13(3)	11(2)	60(2)	59(2)	78(1)	23(1)	43(2)	39(2)	21(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	5.4	-
Asteromphalus heptactis	-	1.4	-	1.5	-	-	-	-	-
Bacteriastrum delicatulum	0.9	-	-	-	-	-	-	0.8	-
Chaetoceros (total)	36	15	0.5	8.1	54	14	2.1	6.1	60
Subgenus Phaeoceros (total)	18	11	0.5	3.1	8.0	7.9	2.1	6.1	60
C. atlanticus	-	-	-	-	0.9	-	-	-	34
C. coarctatus	-	-	-	-	-	-	-	-	-
C. concavicornis	2.3	6.9	-	-	-	-	-	-	17
C. convolutus	15	4.2	-	-	-	1.3	1.4	6.1	9.0
C. peruvianus	-	-	0.5	3.1	-	6.6	-	0.7	-
C. tetrastichon	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	19	4.2	-	5.1	46	6.6	-	-	-
C. affinis	-	-	-	-	-	-	-	-	-
C. compressus	3.0	-	-	5.1	29	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-
C. debilis	-	-	-	-	14	-	-	-	-
C. decipiens	-	-	-	-	-	0.4	-	-	-
C. didymus	-	-	-	-	-	-	-	-	-
C. distans	-	-	-	-	-	-	-	-	-
C. lorenzianus	13	4.2	-	-	-	6.1	-	-	-
C. nipponica	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	2.8	-	-	-	-	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	1.5	-	-	-	-	-
Coscinodiscus marginatus	-	-	-	-	-	-	-	-	-
Dactyliosolen antarcticus	-	-	-	-	1.1	-	-	-	-
Denticula sp	-	-	-	6.1	-	-	-	-	2.9
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-
L. minimus	-	-	-	4.1	-	-	-	-	-
Navicula sp	0.5	-	-	-	-	1.3	-	-	2.9
Nitzschia longissima	0.7	6.9	1.5	5.6	-	0.9	-	-	-
N. seriata	1.4	17	-	63	9.2	-	-	62	-
Rhizosolenia (total)	55	21	98	6.1	33	79	98	3.1	11
R. alata f. gracillima	8.8	-	65	-	-	4.8	-	-	-
R. alata f. inermis	-	-	18	-	-	-	-	-	-
R. bergoni	10	14	10	-	-	16	3.5	-	-
R. calcar avis	32	4.2	-	-	2.3	56	76	2.3	-
R. hebetata f. semispina	-	1.4	2.5	3.6	3.5	-	17	0.8	11
R. setigera	0.2	1.4	-	-	-	0.4	-	-	-
R. stolterfothi	-	-	-	2.0	28	-	-	-	-
Skeletonema costatum	-	4.2	-	-	-	-	-	7.7	-
Thalassionema nitzschioides	-	-	-	1.5	-	-	-	-	14
Thalassiothrix longissima	2.5	35	-	1.0	-	2.6	-	-	2.9

Table C-9a, continued

Station	B55	1014	B58	B59	1015	B61	1016	B63	1017
Latitude (N)	39°49'	39°10'	39°03'	39°00'	38°54'	38°44'	38°23'	38°21'	38°19'
Longitude (E)	144°05'	144°00'	144°19'	144°38'	144°58'	145°27'	146°00'	145°35'	145°15'
Date	VIII-18	VIII-18	VIII-18	VIII-18	VIII-18	VIII-19	VIII-19	VIII-19	VIII-19
Time (GCT)	0850	1450	1800	2050	2300	0250	0400	0753	1055
Depth (m)	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter	28(3)	12(2)	19(3)	61(3)	15(2)	34(2)	21(2)	42(3)	54(2)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	-	1.6	-	-	-	-	3.9	-
Chaetoceros (total)	51	1.2	11	45	5.0	7.1	39	7.5	12
Subgenus Phaeoceros (total)	3.6	-	4.3	2.3	2.0	-	1.4	0.2	3.4
C. atlanticus	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. concavicornis	-	-	-	-	-	-	-	-	-
C. convolutus	-	-	-	-	-	-	-	-	-
C. peruvianus	2.2	-	4.3	2.3	2.0	-	1.4	0.2	3.4
C. tetrastichon	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	48	1.2	6.5	43	3.0	7.1	37	7.2	9.0
C. affinis	-	-	-	-	-	-	7.1	-	-
C. compressus	-	-	-	-	-	-	-	-	2.8
C. curvisetus	5.8	-	5.4	1.0	-	4.5	-	-	4.5
C. debilis	-	-	-	-	-	-	-	-	-
C. decipiens	-	-	-	-	-	-	1.4	-	-
C. didymus	1.4	-	-	-	3.0	-	21	1.7	-
C. distans	36	-	-	42	-	-	-	5.1	-
C. lorenzianus	1.1	3.8	-	-	-	2.7	7.1	0.5	1.7
C. nipponica	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-
C. spp (misc. Hyalochaete)	-	-	1.1	-	-	-	-	-	-
Climacodium biconcavum	-	-	-	-	-	5.4	-	1.0	-
Corethron hystrix	-	-	-	-	-	-	-	-	-
Coscinodiscus marginatus	-	1.2	-	-	2.0	-	-	-	-
Dactyliosolen antarcticus	-	-	-	-	-	-	-	-	-
Denticula sp	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	2.5	-	-	-	-	-	-	1.2	-
L. minimus	-	-	-	2.0	-	-	-	-	-
Navicula sp	0.4	-	-	0.3	-	1.8	-	0.7	-
Nitzschia longissima	-	-	-	-	-	-	-	-	-
N. seriata	0.4	-	-	-	-	-	-	0.5	-
Rhizosolenia (total)	43	95	87	52	91	84	59	83	88
R. alata f. gracillima	3.6	10	8.6	5.6	30	11	9.2	19	15
R. alata f. inermis	-	-	-	-	-	-	-	-	-
R. bergoni	-	-	-	-	10	-	3.6	0.2	-
R. calcar avis	37	82	75	39	51	70	43	60	73
R. hebetata f. semispina	-	-	-	-	-	-	-	-	-
R. setigera	0.4	-	1.6	1.3	-	0.9	-	0.5	-
R. stolterfothi	-	-	-	-	-	-	-	-	-
Skeletonema costatum	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-
Thalassiothrix longissima	0.4	-	-	0.3	-	-	-	-	-

Table C-9a, continued

Station	B65	B67	1018	B69	B70	B71	1020	1021	1022
Latitude (N)	38°16'	38°10'	38°12'	38°14'	38°14'	38°14'	38°21'	38°14'	39°30'
Longitude (E)	145°00'	144°26'	144°17'	144°04'	143°48'	143°29'	142°41'	142°00'	142°27'
Date	VIII-19	VIII-20	VII-20	VIII-20	VIII-20	VIII-20	VIII-21	VIII-21	VIII-31
Time (GCT)	1755	0000	0455	1450	1750	2100	0250	0805	0630
Depth (m)	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter	13(2)	54(1)	12(0)	30(0)	52(3)	11(4)	58(3)	49(3)	79(3)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	31	-	-	-	5.3
Asteromphalus heptactis	-	-	50	-	-	0.3	-	-	-
Bacteriastrum delicatulum	6.6	-	-	-	-	32	25	7.5	10
Chaetoceros (total)	87	11	-	-	47	59	72	98	77
Subgenus Phaeoceros (total)	0.7	11	-	-	1.7	6.3	0.5	-	-
C. atlanticus	-	-	-	-	-	-	-	-	-
C. coarctatus	-	-	-	-	-	-	-	-	-
C. concavicornis	-	-	-	-	-	-	-	-	-
C. convolutus	-	-	-	-	-	-	-	-	-
C. peruvianus	0.5	-	-	-	-	5.3	0.5	-	-
C. tetrastichon	-	11	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	86	-	-	-	45	53	71	98	77
C. affinis	-	-	-	-	9.2	3.7	9.7	6.4	7.9
C. compressus	24	-	-	-	1.7	8.7	35	19	12
C. curvisetus	54	-	-	-	4.6	10	11	9.2	2.8
C. debilis	-	-	-	-	-	-	3.5	5.5	4.7
C. decipiens	-	-	-	-	-	-	0.3	1.6	2.3
C. didymus	-	-	-	-	5.8	1.3	0.8	4.9	13
C. distans	5.9	-	-	-	13	-	2.3	6.4	14
C. lorenzianus	-	-	-	-	1.7	2.9	-	5.1	7.9
C. nipponica	-	-	-	-	-	-	-	18	4.7
C. radicans	-	-	-	-	-	18	3.1	9.2	7.9
C. spp (misc. Hyalochaete)	1.9	-	-	-	6.4	3.4	-	-	-
Climacodium biconcavum	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	-	-	-	-	-	-	-	0.2
Coscinodiscus marginatus	-	-	-	-	-	-	-	-	-
Dactyliosolen antarcticus	-	-	-	-	0.6	-	-	-	0.4
Denticula sp	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	-	-	-	6.4	-	-	-	1.7
L. minimus	-	28	-	-	3.9	7.4	-	-	-
Navicula sp	-	5.6	-	-	-	-	-	-	0.4
Nitzschia longissima	-	-	-	-	-	-	0.2	-	-
N. seriata	-	-	-	-	2.3	-	-	-	0.6
Rhizosolenia (total)	0.5	50	50	100	7.5	0.5	0.6	3.1	1.3
R. alata f. gracillima	0.5	17	-	-	1.2	0.5	0.2	-	-
R. alata f. inermis	-	-	-	-	-	-	-	-	-
R. bergoni	-	-	50	-	-	-	0.2	0.6	1.3
R. calcar avis	-	33	-	-	2.3	-	-	0.2	-
R. hebetata f. semispina	-	-	-	-	-	-	-	-	-
R. setigera	-	-	-	-	-	-	-	-	-
R. stolterfothi	-	-	-	-	3.5	-	-	-	-
Skeletonema costatum	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	1.3	0.9	-
Thalassiothrix longissima	-	-	-	-	-	-	-	-	-

Table C-9a, continued

Station	B78	1024	1026	B84	1027	1028	1029	1030	B95
Latitude (N)	39°32'	39°35'	39°36'	39°34'	39°32'	40°28'	40°29'	40°27'	40°12'
Longitude (E)	143°25'	144°00'	146°00'	146°30'	146°59'	145°58'	145°00'	144°00'	142°41'
Date	VIII-31	VIII-31	IX-1	IX-1	IX-1	IX-2	IX-2	IX-2	IX-3
Time (GCT)	1500	1840	1035	1450	1800	0145	1500	2210	0845
Depth (m)	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter	32(2)	47(3)	90(1)	14(2)	35(1)	99(1)	44(3)	24(3)	13(3)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100
Asterionella japonica	-	-	-	-	-	-	-	-	-
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-
Bacteriastrum delicatulum	-	7.7	-	-	-	-	11	11	1.4
Chaetoceros (total)	16	82	6.7	6.4	8.7	23	82	86	95
Subgenus Phaeoceros (total)	11	0.4	-	-	-	7.6	0.7	-	3.1
C. atlanticus	-	-	-	-	-	-	-	-	-
C. coarctatus	11	-	-	-	-	-	-	-	-
C. concavicornis	-	-	-	-	-	-	-	-	-
C. convolutus	-	-	-	-	-	-	-	-	0.2
C. peruvianus	-	0.4	-	-	-	1.5	0.7	-	-
C. tetrastichon	-	-	-	-	-	6.1	-	-	1.9
Subgenus Hyalochaete (total)	4.6	82	6.7	6.4	8.7	15	81	86	92
C. affinis	-	17	-	-	-	-	26	29	-
C. compressus	-	15	-	-	-	-	18	3.8	0.2
C. curvisetus	-	3.8	-	-	-	-	9.5	3.0	85
C. debilis	-	3.5	-	-	-	-	-	-	-
C. decipiens	-	3.1	-	-	-	-	1.2	2.5	-
C. didymus	4.6	4.8	6.7	6.4	-	15	6.2	8.8	0.5
C. distans	-	13	-	-	-	-	2.7	-	0.5
C. lorenzianus	-	8.2	-	-	8.7	-	2.0	15	0.7
C. nipponica	-	7.7	-	-	-	-	3.4	2.5	-
C. radicans	-	3.8	-	-	-	-	2.0	20	4.3
C. spp (misc. Hyalochaete)	-	-	-	-	-	-	-	-	0.2
Climacodium biconcavum	7.4	-	-	-	44	3.0	-	1.5	-
Corethron hystrix	-	-	-	-	-	-	-	0.3	-
Coscinodiscus marginatus	-	-	3.3	-	-	-	-	-	-
Dactyliosolen antarcticus	-	-	-	-	-	-	-	-	-
Denticula sp	-	-	-	-	-	-	-	-	-
Leptocylindrus danicus	-	1.0	20	-	-	-	0.7	-	-
L. minimus	28	-	-	8.5	-	-	-	-	-
Navicula sp	7.4	-	-	15	-	3.0	0.1	-	-
Nitzschia longissima	-	-	-	-	-	-	-	-	0.5
N. seriata	-	-	-	-	-	-	2.0	-	0.7
Rhizosolenia (total)	40	7.9	67	68	48	71	3.1	1.3	0.9
R. alata f. gracillima	17	2.3	6.7	11	8.7	30	0.7	-	-
R. alata f. inermis	-	-	-	-	-	-	-	-	-
R. bergoni	-	3.1	-	-	-	9.1	1.4	0.5	0.2
R. calcar avis	19	1.5	43	45	35	27	0.5	0.8	0.5
R. hebetata f. semispina	-	-	-	-	-	-	-	-	-
R. setigera	2.8	0.6	-	6.4	-	4.5	-	-	0.2
R. stolterfothi	-	-	-	-	-	-	-	-	-
Skeletonema costatum	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	1.1	-	-
Thalassiothrix longissima	-	-	-	-	-	-	-	-	-

TABLE C-9b. Less abundant diatoms (less than 5% at any station) taken in surface, 50- and 100-meter water samples (330 ml) at Yushio Maru stations.

PLANKTON DIATOMS	
Bacteriastrum comosum	1016, 1020
B. hyalinum	1001, B55, B59, B63, B65
B. varians	1001, 1002, B25, B27, B30
Biddulphia aurita	1006, 1011, 1013, B36, B49
Cerataulina bergoni	B26, B28, B30, B65, B70
Chaetoceros atlanticus v. audax	1003, 1010, 1012
C. danicus	B27, B38, B55, B65, B70, B71, B95
C. densus	B70
C. okamurai	B36
C. pendulus	B28, B30, B71
C. rostratus	B28, B30
C. constrictus	B27, B28, B30
C. didymus v. anglica	B27, B55
C. diversus	B55
C. frichei	1029, 1030
C. laciniosus	1001, 1021, 1024
C. messanensis	B55, B71
C. paradoxus	B25, B26, B30
C. socialis	1029
C. subsecundus	1012, 1020, 1021, B27, B28, B71
C. van heurcki	B70
Climacodium frauenfeldianum	1001
Coscinodiscus excentricus	1004, 1009, B71, B78, B84
C. radiatus	1001, 1003, 1026, B25, B34, B36, B49
C. stellaris	1006, 1007, 1012
C. wailesi	1005, 1009, 1013, B47
C. sp	1002, 1012, 1013, B27
Eucampia cornuta	B63
E. zoodiacus	1001, 1002, 1007, 1015, 1020, 1029, B26
Hemiaulus haucki	1024, B30, B32, B40, B55, B65, B71
Lauderia borealis	1006, 1009, 1022
Nitzschia closterium	1004, B26, B32, B38, B44, B70, B71, B78, B95
N. delicatissima	B26, B32
Rhizosolenia alata	1007, 1010, B26, B34, B36, B38, B40, B49, B53, B55, B58, B59, B61, B63, B84
R. ala. f. curvirostris	1004, 1006, 1010, 1012
R. ala. f. indica	B63
R. delicatula	1002, 1004
R. fragilissima	1001, 1009, 1020, 1021, 1026, 1029, B25, B30, B32, B34, B49, B59, B61
R. hebetata f. hiemalis	1001, 1002, 1004, 1007
R. cylindrus	1029
R. styliformis	1024, 1027, 1028, B25, B38, B44, B49, B58, B59, B61, B63
R. styl. v. latissima	1005, 1012, 1013, 1014, 1016, B78, B84
Stephanopyxis palmeriana	1013
Thalassiosira decipiens	1001, 1002, 1006, 1022, B26
Thalassiothrix frauenfeldi	1001, 1013, 1021, 1030, B38, B40, B49, B53
Tropidoneis antarcticua v. polyplasta	1007

Table C-9b, continued

MISCELLANEOUS PLANKTON	
Ceratium arcticum	B84
C. fusus	1001, 1005, B59, 1008, 1021
C. lineatum	B36, B38, B50, B95
C. longipes	1022
C. macroceros	1028, 1030
C. tripos	B28, 1003-1005, B44, B50, B53
C. trip. v. atlanticum	1008, 1011, B95
Dinophysis ovum	1010
D. sp	B32, B47
Peridinium spp	1002, 1003, 1012, 1013, 1016, 1018, 1021
Acanthostomella norvegica	1003, 1007, 1008, 1010, 1011
Amphorella quadrilineata	B50
Codonellopsis frigida	1003-1008, 1010, 1011
Parafavella gigantea	B32
P. jorgenseni	B32
P. longidentata	1002, 1010
P. ventricosa	1003-1013
Ptychocylis obtusa	1003-1013
Salpingella acuminata	1012

TABLE C-10a. More abundant diatoms by per cent in spaced water samples (330 ml) taken between 0 and 200 meters at Oshoro Maru stations in the Bering Sea.[a)]

Station	a	b	c	d	e	f	g	h	i	j
Latitude	42°05'N	42°28'N	42°46'N	44°06'N	45°22'N	46°43'N	48°03'N	49°30'N	50°50'N	52°12'N
Longitude	143°49'E	146°07'E	148°25'E	150°16'E	151°50'E	153°34'E	155°20'E	157°20'E	159°10'E	161°04'E
Date	VI-21	VI-22	VI-22	VI-23	VI-23	VI-24	VI-24	VI-25	VI-25	VI-26
Time (GCT)	2200	0958	2200	1000	2200	1000	2200	1000	2320	2205
Depth (m)	0	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter[b)]	12(2)	16(3)	87(1)	45(1)	13(2)	34(1)	26(1)	24(1)	65(2)	13(3)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	52	21	27	11	9.0	-	14	-	54	48
Subgenus Phaeoceros (total)	46	16	22	11	5.4	-	14	-	-	11
C. atlanticus	29	8.4	8.5	6.3	5.4	-	14	-	-	0.8
C. concavicornis	10	2.2	5.2	-	-	-	-	-	-	1.5
C. convolutus	5.2	2.9	8.5	2.2	-	-	-	-	-	8.7
Subgenus Hyalochaete (total)	5.2	5.1	5.2	-	3.4	-	-	-	54	38
C. affinis	5.2	-	-	-	-	-	-	-	-	-
C. compressus	-	2.9	-	-	-	-	-	-	27	11
C. constrictus	-	-	-	-	-	-	-	-	-	7.6
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	-	2.2	-	-	-	-	-	-	25	4.9
C. decipiens	-	-	5.2	-	-	-	-	-	-	3.0
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	-	-	-	-	-	-	-	-	-	2.3
C. furcellatus	-	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	-
C. socialis	-	+	+	-	-	-	+	-	+	+
C. subsecundus	-	-	-	-	-	-	-	-	2.3	8.0
Corethron hystrix	6.9	2.5	10	-	-	-	-	-	-	0.4
Coscinodiscus excentricus	-	-	-	-	-	-	-	-	-	-
C. radiatus	-	0.4	5.2	2.2	-	-	-	-	-	-
C. spp	-	-	-	2.2	-	-	7.1	-	-	0.4
Denticula sp	-	30	-	37	84	20	14	-	12	4.2
Eucampia zoodiacus	-	-	-	-	-	-	-	-	9.2	6.3
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	10	8.4	-	-	-	-	-	-	-	-
F. striatula	-	-	-	-	-	-	-	-	-	-

a) Identified by M. Ohwada and H. Kon (HMO).
b) Number in parentheses indicates power of 10 by which the first number should be multiplied.
+: Present in small numbers.

Table C-10a, continued

Station	a	b	c	d	e	f	g	h	i	j
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	5.2	1.8	1.7	-	0.9	-	7.1	-	1.1	0.8
Nitzschia closterium	-	0.7	-	2.2	-	-	-	-	1.1	1.9
N. delicatissima	-	-	-	-	-	-	-	-	-	-
N. longissima	-	-	-	2.2	-	-	-	-	-	0.4
N. seriata	-	1.8	-	-	-	8.0	-	-	-	6.1
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	5.2	4.4	3.4	-	-	-	-	-	1.1	-
R. ala. f. indica	-	-	-	-	-	-	-	-	-	-
R. delicatula	-	-	8.5	-	-	-	-	-	-	1.5
R. fragilissima	-	1.5	5.2	-	0.9	-	-	-	14	6.1
R. hebetata f. hiemalis	-	-	-	-	0.9	8.0	14	15	-	-
R. heb. f. semispina	8.6	6.1	19	6.5	-	-	-	5.0	-	-
Stephanopyxis nipponica	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	3.4	1.5	6.9	6.5	-	24	-	5.0	2.3	1.1
Thalassiosira decipiens	-	13	-	4.4	-	-	-	-	2.3	-
T. gravida	-	-	-	-	-	-	-	-	-	3.8
T. hyalina	-	1.3	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	4.0	-	-	-	7.6
T. subtilis	-	-	-	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	-	-	3.4	6.5	-	16	14	10	-	1.1
T. longissima	1.7	5.5	3.7	11	4.5	12	14	60	2.3	1.9
Tropidoneis antarctica v. polyplasta	1.7	0.7	-	-	-	-	7.1	5.0	-	-

Table C-10a, continued

Station	2	k	3	4	5	6	7	8	8	8
Latitude	52°52'N	53°00'N	53°00N	53°01'N	53°00'N	53°02'N	53°02'N	54°30'N	54°30'N	54°30'N
Longitude	161°50'E	163°25'E	164°00'E	166°00'E	168°00'E	170°00'E	172°00'E	170°33'E	170°33'E	170°33'E
Date	VI-27	VI-27	VI-28	VI-28	VI-29	VI-30	VII-1	VII-1	VII-1	VII-1
Time (GCT)	0600	2100	0055	2035	0640	0305	0320	1630	1705	1705
Depth (m)	0	0	0	0	0	0	0	0	10	25
No. of Diatoms/liter	29(2)	41(2)	10(3)	40(2)	23(2)	28(3)	29(4)	26(2)	60(1)	32(1)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	6.2	-	-
Chaetoceros (total)	7.8	19	48	70	32	37	60	17	-	-
Subgenus Phaeoceros (total)	7.8	15	42	63	32	27	26	17	-	-
C. atlanticus	3.6	2.2	1.2	-	-	-	1.1	4.2	-	-
C. concavicornis	-	4.9	29	7.1	7.2	7.9	7.2	-	-	-
C. convolutus	4.3	8.5	11	56	25	18	16	12	-	-
Subgenus Hyalochaete (total)	-	3.5	6.1	6.2	-	10	35	-	-	-
C. affinis	-	-	-	-	-	-	4.1	-	-	-
C. compressus	-	-	0.9	4.4	-	1.9	9.1	-	-	-
C. constrictus	-	-	-	-	-	-	21	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	-	-	2.9	-	-	-	16	-	-	-
C. decipiens	-	-	-	-	-	6.0	-	-	-	-
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	-	3.5	2.3	-	-	-	-	-	-	-
C. furcellatus	-	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	-
C. socialis	-	-	+	-	-	+	+	-	-	-
C. subsecundus	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	0.4	0.9	1.8	-	0.6	0.8	-	5.0	-
Coscinodiscus excentricus	-	-	-	-	-	-	-	-	-	-
C. radiatus	-	-	-	0.9	-	-	-	-	-	-
C. spp	0.7	-	-	-	-	-	-	-	-	-
Denticula sp	26	5.6	3.8	8.0	-	-	3.0	17	40	14
Eucampia zoodiacus	1.4	-	1.2	1.8	-	0.6	-	-	-	-
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	-	-	-	-	-	-	-	-	-	-
F. striatula	-	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	2	k	3	4	5	6	7	8	8	8
Leptocylindrus danicus	-	-	-	-	-	2.2	-	-	-	21
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	0.7	-	1.2	-	2.9	0.3	-	6.2	-	14
Nitzschia closterium	-	-	0.6	-	-	-	-	-	5.0	7.2
N. delicatissima	-	-	-	-	-	-	-	-	-	-
N. longissima	-	-	0.3	-	1.4	-	-	2.1	5.0	7.2
N. seriata	11	29	36	13	59	49	30	29	20	14
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	0.7	2.7	2.9	-	-	1.6	0.6	-	-	-
R. ala. f. indica	-	-	-	-	-	-	-	-	-	-
R. delicatula	-	-	-	-	-	-	-	-	-	-
R. fragilissima	-	-	-	-	-	-	-	-	-	-
R. hebetata f. hiemalis	0.7	0.9	1.5	-	-	0.3	1.4	-	-	7.2
R. heb. f. semispina	-	-	-	4.5	-	2.2	0.3	12	10	-
Stephanopyxis nipponica	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	2.9	1.9	-	4.2	10	14
Thalassiosira decipiens	-	-	-	-	-	-	1.1	-	-	-
T. gravida	-	-	-	-	-	-	-	-	-	-
T. hyalina	-	-	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	-	-	-	-	-
T. subtilis	-	-	-	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	1.4	-	0.6	-	-	0.6	-	4.2	-	-
T. longissima	48	40	2.9	-	1.4	4.1	1.4	4.2	5.0	-
Tropidoneis antarctica v. polyplasta	-	0.4	-	-	-	-	0.3	-	-	-

Table C-10a, continued

Station	8	8	8	8	8	9	10	11	12	13
Latitude	54°30'N	54°30'N	54°30'N	54°30'N	54°30'N	55°58'N	57°41'N	58°29'N	59°00'N	58°30'N
Longitude	170°33'E	170°33'E	170°33'E	170°33'E	170°33'E	169°11'E	167°59'E	166°32'E	170°00'E	173°15'E
Date	VII-1	VII-1	VII-1	VII-1	VII-1	VII-2	VII-3	VII-4	VII-5	VII-6
Time (GCT)	1705	0705	0648	0648	0648	1835	2230	0830	0305	0220
Depth (m)	50	75	100	150	200	0	0	0	0	0
No. of Diatoms/liter	14(1)	42(0)	12(0)	18(0)	18(0)	14(2)	38(2)	13(3)	14(3)	32(2)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	5.7	0.8	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	17	7.1	-	-	-	-	16	3.4	54	39
Subgenus Phaeoceros (total)	-	-	-	-	-	-	-	-	4.5	4.2
C. atlanticus	-	-	-	-	-	-	-	-	-	-
C. concavicornis	-	-	-	-	-	-	-	-	-	-
C. convolutus	-	-	-	-	-	-	-	-	-	-
Subgenus Hyalochaete (total)	17	7.1	-	-	-	-	16	3.4	50	35
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	-	-	-	-	-	-	-	8.8	17
C. constrictus	-	-	-	-	-	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	3.2	-
C. debilis	17	-	-	-	-	-	-	-	12	14
C. decipiens	-	7.1	-	-	-	-	9.6	3.4	6.3	4.2
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	-	-	-	-	-	-	-	-	10	-
C. furcellatus	-	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	-
C. socialis	-	-	-	-	-	-	-	-	-	-
C. subsecundus	-	-	-	-	-	-	6.4	-	5.1	-
Corethron hystrix	-	7.1	-	17	-	-	-	2.3	-	-
Coscinodiscus excentricus	-	-	-	-	-	-	-	-	-	-
C. radiatus	-	-	-	-	-	-	-	-	0.6	-
C. spp	-	-	-	-	-	1.9	0.8	1.2	-	-
Denticula sp	-	14	-	33	33	-	12	24	3.2	-
Eucampia zoodiacus	17	-	-	-	-	-	1.6	1.2	4.5	8.5
Fragilaria islandica	-	-	-	-	-	-	12	-	-	-
F. oceanica	8.3	-	-	-	-	-	4.8	-	-	-
F. striatula	-	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	8	8	8	8	8	9	10	11	12	13
Leptocylindrus danicus	25	-	-	-	-	5.7	-	-	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	12	7.1	25	33	17	3.9	0.8	1.2	0.6	1.4
Nitzschia closterium	-	-	-	-	-	25	-	3.4	1.3	2.8
N. delicatissima	-	-	-	-	-	5.7	20	20	13	7.0
N. longissima	-	-	-	-	-	15	-	-	0.6	-
N. seriata	54	50	-	-	-	23	8.0	15	6.3	-
Pleurosigma sp	-	7.1	-	-	-	-	0.8	-	-	-
Rhizosolenia alata	-	7.1	-	-	-	1.9	-	1.2	0.6	2.8
R. ala. f. indica	-	-	-	-	-	-	-	-	-	-
R. delicatula	-	-	-	-	-	-	1.6	-	0.6	-
R. fragilissima	-	-	-	-	-	-	5.6	-	1.9	4.2
R. hebetata f. hiemalis	-	-	-	-	-	-	-	2.3	-	-
R. heb. f. semispina	-	-	50	-	-	-	-	-	-	-
Stephanopyxis nipponica	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	8.3	-	25	17	17	5.7	1.6	12	5.1	1.4
Thalassiosira decipiens	-	-	-	-	-	-	-	-	3.2	2.8
T. gravida	-	-	-	-	-	-	-	-	1.3	17
T. hyalina	-	-	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	-	-	-	-	-
T. subtilis	-	-	-	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	-	-	-	-	33	3.9	-	2.3	-	5.6
T. longissima	-	-	-	-	-	-	12	5.7	3.2	4.2
Tropidoneis antarctica v. polyplasta	-	-	-	-	-	1.9	1.6	-	-	-

Table C-10a, continued

Station	13	13	13	13	13	13	13	14	15	16
Latitude	58°30'N	58°30'N	58°30'N	58°30'N	58°30'N	58°30'N	58°30'N	56°54'N	55°10'N	53°25'N
Longitude	173°15'E	173°15'E	173°15'E	173°15'E	173°15'E	173°15'E	173°15'E	173°17'E	173°17'E	173°38'E
Date	VII-6	VII-6	VII-6	VII-6	VII-6	VII-6	VII-6	VII-6	VII-7	VII-7
Time (GCT)	0340	0340	0327	0340	0327	0327	0327	1840	0910	2255
Depth (m)	10	25	50	75	100	150	200	0	0	0
No. of Diatoms/liter	50(2)	30(3)	78(2)	53(2)	52(2)	13(2)	43(2)	29(3)	15(4)	31(3)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	-	-	0.2	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	45	57	67	83	83	79	77	3.5	14	43
Subgenus Phaeoceros (total)	13	7.2	1.2	4.0	-	-	-	-	0.9	12
C. atlanticus	-	-	-	2.3	-	-	-	-	-	3.9
C. concavicornis	1.2	-	-	-	-	-	-	-	-	-
C. convolutus	1.2	3.0	-	-	-	-	-	-	-	5.5
Subgenus Hyalochaete (total)	32	50	66	79	83	79	77	3.5	13	31
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	18	10	13	2.8	5.6	8.1	-	-	6.1	13
C. constrictus	-	-	-	-	-	-	-	-	-	2.3
C. curvisetus	-	4.8	-	-	-	-	-	-	-	-
C. debilis	9.0	27	9.1	2.8	-	6.8	-	-	6.5	12
C. decipiens	1.2	1.8	1.8	2.3	-	8.1	4.2	1.7	-	3.9
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	-	-	-	-	-	-	-	-	-	-
C. furcellatus	-	6.0	38	58	7.0	50	73	-	-	-
C. radicans	-	-	-	-	-	-	-	-	-	-
C. socialis	+	-	+	-	+	-	-	-	+	-
C. subsecundus	-	-	4.0	12	5.6	5.4	-	1.2	-	-
Corethron hystrix	-	0.6	1.5	0.6	0.8	-	4.2	-	-	0.4
Coscinodiscus excentricus	-	-	-	-	-	-	-	-	-	-
C. radiatus	0.6	-	-	-	-	-	-	-	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Denticula sp	1.8	-	-	-	-	-	-	2.5	-	21
Eucampia zoodiacus	3.0	1.8	9.7	4.8	-	8.1	4.2	0.8	-	-
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	-	-	-	-	-	-	-	-	-	-
F. striatula	-	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	13	13	13	13	13	13	13	14	15	16
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	-	0.6	-	-	0.8	1.3	4.2	0.2	0.2	0.8
Nitzschia closterium	-	-	-	-	-	-	-	7.9	1.9	3.1
N. delicatissima	25	15	-	-	-	-	-	7.4	74	2.0
N. longissima	0.6	0.6	-	-	-	-	-	1.2	-	-
N. seriata	9.6	3.9	1.5	-	-	-	-	1.7	7.2	16
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	0.6	0.9	-	0.6	-	-	-	-	0.7	5.8
R. ala. f. indica	-	-	-	-	-	-	-	0.2	-	0.4
R. delicatula	-	-	-	-	-	-	-	-	-	-
R. fragilissima	3.0	2.1	0.6	-	-	4.1	-	-	-	1.0
R. hebetata f. hiemalis	0.6	0.6	-	-	0.8	-	-	-	-	-
R. heb. f. semispina	0.6	-	-	-	-	-	-	-	1.9	2.0
Stephanopyxis nipponica	2.4	1.2	2.7	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	0.6	-	-	-	0.4	-	-
Thalassiosira decipiens	1.2	7.8	4.6	6.8	6.8	2.7	-	-	-	-
T. gravida	-	6.6	3.7	-	-	-	-	-	-	-
T. hyalina	-	-	5.8	-	1.6	2.7	-	-	-	-
T. nordenskioldi	-	-	1.8	-	1.6	2.7	8.3	0.4	-	-
T. subtilis	-	-	-	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	1.2	-	-	-	-	-	-	0.4	-	-
T. longissima	4.8	-	-	1.1	0.8	-	-	-	0.9	0.4
Tropidoneis antarctica v. polyplasta	-	-	-	-	-	-	-	0.2	-	-

Table C-10a, continued

Station	17	18	19	20	21	22	23	23	23	23
Latitude	53°10'N	52°50'N	52°28'N	52°30'N	53°14'N	53°54'N	53°03'N	53°03'N	53°03'N	53°03'N
Longitude	175°04'E	176°56'E	178°40'E	178°54'E	178°40'E	178°40'E	178°52'W	178°52'W	178°52'W	178°52'W
Date	VII-8	VII-8	VII-9	VII-9	VII-10	VII-10	VII-10	VII-10	VII-10	VII-10
Time (GCT)	0700	1550	0155	1223	0550	1220	0127	0127	0127	0127
Depth (m)	0	0	0	0	0	0	0	10	25	50
No. of Diatoms/liter	81(2)	10(4)	63(2)	60(3)	52(2)	61(2)	18(4)	17(4)	23(4)	21(3)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Biddulphia aurita	4.2	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	19	70	21	76	9.3	13	78	82	75	71
Subgenus Phaeoceros (total)	4.2	3.2	11	11	4.6	7.6	5.8	6.7	3.1	2.7
C. atlanticus	4.2	0.6	11	1.9	4.6	7.6	2.0	1.9	1.8	-
C. concavicornis	-	-	-	1.7	-	-	0.8	-	-	-
C. convolutus	-	2.3	-	7.3	-	-	2.8	4.8	1.2	2.2
Subgenus Hyalochaete (total)	15	67	10	65	4.6	5.4	73	75	73	69
C. affinis	-	2.3	-	-	-	-	2.5	-	-	-
C. compressus	4.2	8.2	5.3	13	4.6	-	18	15	12	16
C. constrictus	-	-	-	5.0	-	-	3.3	1.5	2.5	15
C. curvisetus	-	6.7	-	-	-	-	-	-	-	-
C. debilis	-	37	5.3	32	-	-	24	44	35	26
C. decipiens	-	-	-	0.8	-	-	-	1.1	1.5	4.5
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	-	11	-	2.5	-	4.3	13	3.8	-	2.7
C. furcellatus	8.3	-	-	-	-	-	-	-	-	-
C. radicans	-	-	-	9.8	-	-	10	5.1	17	-
C. socialis	-	+	+	+	+	-	+	-	+	+
C. subsecundus	-	-	-	1.4	-	-	2.8	2.5	4.0	-
Corethron hystrix	-	0.3	1.3	0.8	-	1.1	0.5	1.0	-	1.3
Coscinodiscus excentricus	-	-	-	-	-	-	-	-	-	-
C. radiatus	-	-	-	-	-	-	-	0.2	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Denticula sp	37	2.3	46	1.9	42	33	0.5	2.9	3.1	4.5
Eucampia zoodiacus	-	-	-	-	-	-	-	1.1	-	-
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	-	-	-	-	-	-	-	-	-	-
F. striatula	-	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	17	18	19	20	21	22	23	23	23	23
Leptocylindrus danicus	-	-	-	-	-	-	0.8	-	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	2.1	-	1.3	-	2.1	-	-	-	-	-
Nitschia closterium	-	0.9	3.2	1.9	2.1	1.1	0.8	-	-	1.8
N. delicatissima	6.2	13	-	1.4	2.1	7.6	-	-	3.1	2.2
N. longissima	-	-	-	0.6	-	1.1	-	-	-	-
N. seriata	10	7.3	8.4	3.6	2.1	20	3.0	5.1	6.8	12
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	4.2	0.9	2.1	1.4	-	8.7	-	-	-	0.9
R. ala. f. indica	2.1	0.3	-	-	-	5.4	-	-	-	-
R. delicatula	-	-	-	-	-	-	-	-	-	-
R. fragilissima	-	0.6	-	1.4	-	-	-	1.1	-	0.9
R. hebetata f. hiemalis	4.2	0.6	8.4	0.5	28	3.3	3.8	0.8	0.6	1.3
R. heb. f. semispina	2.1	-	1.3	8.4	2.1	1.1	7.1	5.1	9.0	4.5
Stephanopyxis nipponica	-	1.8	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	1.2	2.1	0.6	7.0	-	-	-	-	-
Thalassiosira decipiens	-	-	3.2	-	2.1	-	0.3	0.4	1.2	-
T. gravida	-	-	-	-	-	-	-	-	-	-
T. hyalina	-	-	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	-	-	-	-	-
T. subtilis	-	-	-	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	4.2	-	-	-	-	-	-	-	-	-
T. longissima	2.1	-	2.1	1.1	12	3.3	0.5	0.6	0.9	0.9
Tropidoneis antarctica v. polyplasta	-	-	-	0.3	2.1	1.1	-	0.2	-	-

Table C-10a, continued

Station	23	23	23	23	24	25	26	27	27	27
Latitude	53°03'N	53°03'N	53°03'N	53°03'N	53°50'N	55°34'N	57°00'N	58°49'N	58°49'N	58°49'N
Longitude	178°52'W	178°52'W	178°52'W	178°52'W	178°52'W	178°46'W	178°58'W	178°43'W	178°43'W	178°43'W
Date	VII-10	VII-10	VII-10	VII-10	VII-11	VII-11	VII-12	VII-12	VII-12	VII-12
Time (GCT)	0118	0118	0118	0118	0720	2152	0715	2010	2125	2125
Depth (m)	75	100	150	200	0	0	0	0	10	25
No. of Diatoms/liter	60(2)	74(2)	11(2)	21(1)	46(2)	74(2)	29(2)	12(5)	11(5)	11(4)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	0.8	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	75	64	61	38	5.4	11	-	81	78	67
Subgenus Phaeoceros (total)	3.0	15	-	25	1.6	11	-	9.6	11	1.3
C. atlanticus	3.0	5.7	-	2.9	1.6	11	-	0.7	1.6	0.3
C. concavicornis	-	-	-	-	-	-	-	0.8	1.8	-
C. convolutus	-	9.3	-	22	-	-	-	8.2	7.4	1.0
Subgenus Hyalochaete (total)	72	49	61	13	3.9	-	-	71	67	65
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	10	4.9	6.8	-	-	-	-	7.7	11	1.2
C. constrictus	-	0.8	5.1	-	-	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	39	24	19	-	3.9	-	-	36	32	42
C. decipiens	-	1.6	6.8	8.7	-	-	-	0.8	0.8	3.1
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	15	4.1	-	2.9	-	-	-	23	21	13
C. furcellatus	-	-	-	-	-	-	-	-	-	2.4
C. radicans	-	9.4	20	-	-	-	-	2.0	1.6	2.4
C. socialis	-	-	-	-	-	-	-	+	+	+
C. subsecundus	4.0	-	-	-	-	-	-	-	-	-
Corethron hystrix	-	0.8	1.7	2.9	2.3	-	0.3	1.0	1.3	0.9
Coscinodiscus excentricus	-	-	-	-	-	-	0.9	-	-	0.8
C. radiatus	-	-	-	-	-	1.2	0.3	-	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Denticula sp	9.0	7.3	10	-	7.7	13	42	1.5	0.8	13
Eucampia zoodiacus	-	-	-	-	-	-	-	0.5	0.3	-
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	-	-	-	-	-	-	-	-	-	4.7
F. striatula	-	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	23	23	23	23	24	25	26	27	27	27
Leptocylindrus danicus	-	-	-	-	-	-	-	-	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	2.0	0.4	1.7	-	0.8	2.4	-	-	-	-
Nitschia closterium	-	-	-	-	-	-	-	-	-	-
N. delicatissima	-	-	-	-	2.3	-	-	-	-	-
N. longissima	-	0.4	-	-	-	-	-	-	-	-
N. seriata	-	4.9	1.7	12	-	-	-	14	16	16
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	-	0.8	1.7	1.4	-	-	-	0.2	0.2	-
R. ala. f. indica	-	-	-	1.4	-	-	-	-	-	-
R. delicatula	-	0.8	-	-	-	-	-	-	-	-
R. fragilissima	-	-	-	-	-	-	-	0.3	0.3	0.4
R. hebetata f. hiemalis	-	0.4	-	-	7.7	6.1	11	-	0.2	0.1
R. heb. f. semispina	3.0	15	17	43	58	22	2.2	-	-	-
Stephanopyxis nipponica	-	-	5.1	-	-	-	-	0.5	0.4	0.1
Thalassionema nitzschioides	-	-	-	-	3.1	1.2	-	-	-	-
Thalassiosira decipiens	-	-	-	-	-	-	41	1.0	1.6	6.3
T. gravida	2.0	-	-	-	-	-	-	-	-	-
T. hyalina	-	-	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	-	-	-	-	-
T. subtilis	-	-	-	-	-	-	-	-	+	+
Thalassiothrix frauenfeldi	-	-	-	-	-	2.4	-	-	-	-
T. longissima	1.0	1.2	-	1.4	12	28	0.9	0.1	0.2	0.1
Tropidoneis antarctica v. polyplasta	-	-	-	-	-	-	-	0.3	0.3	0.1

Table C-10a, continued

Station	27	27	27	27	27	1	m	28	29	30
Latitude	58°49'N	58°49'N	58°49'N	58°49'N	58°49'N	57°42'N	57°27'N	57°16'N	57°27'N	57°26'N
Longitude	178°43'W	178°43'W	178°43'W	178°43'W	178°43'W	176°20'W	172°41'W	171°50'W	170°11'W	167°05'W
Date	VII-12	VII-12	VII-12	VII-12	VII-12	VII-14	VII-14	VII-14	VII-15	VII-15
Time (GCT)	2125	2125	2118	2118	2118	0645	2025	2205	0445	1720
Depth (m)	50	75	100	150	200	0	0	0	0	0
No. of Diatoms/liter	14(4)	35(3)	88(3)	39(3)	24(3)	28(2)	28(2)	32(2)	17(1)	21(2)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	2.1	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	68	58	64	41	53	17	71	9.0	82	92
Subgenus Phaeoceros (total)	2.8	1.7	6.2	1.5	2.4	17	13	9.0	82	92
C. atlanticus	-	0.9	-	1.5	-	4.2	-	1.4	-	-
C. concavicornis	-	-	0.7	-	2.4	-	11	-	-	28
C. convolutus	2.8	0.9	5.5	-	-	13	2.7	7.6	82	64
Subgenus Hyalochaete (total)	65	56	58	39	51	-	58	-	-	-
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	1.7	-	9.2	-	-	-	-	-	-
C. constrictus	-	-	-	-	-	-	-	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	38	40	44	25	39	-	-	-	-	-
C. decipiens	1.1	1.0	2.7	-	-	-	12	-	-	-
C. didymus	-	-	-	-	-	-	-	-	-	-
C. distans	2.2	-	1.8	-	-	-	-	-	-	-
C. furcellatus	24	13	6.9	4.6	9.7	-	-	-	-	-
C. radicans	-	-	2.7	-	-	-	46	-	-	-
C. socialis	+	+	+	+	+	-	-	-	-	-
C. subsecundus	-	-	-	-	-	-	-	-	-	-
Corethron hystrix	1.3	1.2	1.1	2.4	2.9	9.5	-	-	7.1	0.6
Coscinodiscus excentricus	0.2	0.3	-	-	0.5	-	-	-	-	-
C. radiatus	-	-	-	-	-	1.6	0.5	-	3.6	-
C. spp	-	-	-	-	-	-	-	-	-	-
Denticula sp	2.2	-	-	-	-	19	-	3.4	-	-
Eucampia zoodiacus	-	-	-	-	-	-	-	-	-	-
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	18	34	29	49	39	11	-	-	-	-
F. striatula	-	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	27	27	27	27	27	1	m	28	29	30
Leptocylindrus danicus	-	-	-	-	-	-	-	4.2	-	-
L. minimus	-	-	-	-	-	-	-	-	-	-
Navicula sp	-	-	-	-	-	-	-	-	-	-
Nitschia closterium	-	-	-	-	-	-	7.5	40	7.1	-
N. delicatissima	-	-	-	-	-	-	-	-	-	-
N. longissima	-	-	-	-	-	-	19	44	-	-
N. seriata	6.6	1.7	1.8	7.7	4.9	-	-	-	-	-
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	0.2	-	0.4	-	-	1.1	-	-	-	-
R. ala. f. indica	-	-	-	-	-	-	-	-	-	-
R. delicatula	-	-	-	-	-	-	-	-	-	-
R. fragilissima	-	-	-	-	-	-	-	-	-	-
R. hebetata f. hiemalis	-	-	-	-	-	6.3	-	-	-	-
R. heb. f. semispina	-	-	-	-	-	22	2.1	-	-	6.4
Stephanopyxis nipponica	-	1.5	0.4	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	-	-	-	-	-	-	-	-
Thalassiosira decipiens	3.6	2.1	3.4	-	-	3.2	-	-	-	-
T. gravida	-	-	-	-	-	-	-	-	-	-
T. hyalina	-	-	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	-	-	-	-	-
T. subtilis	+	-	-	-	+	-	-	-	-	-
Thalassiothrix frauenfeldi	-	-	-	-	-	-	-	-	-	-
T. longissima	-	-	-	0.3	-	1.1	-	-	-	-
Tropidoneis antarctica v. polyplasta	-	-	-	-	-	3.2	-	-	-	0.9

Table C-10a, continued

Station	31	32	33	34	35	36	37	n	o	p
Latitude	57°23'N	57°16'N	56°04'N	54°46'N	53°40'N	52°58'N	52°15'N	52°25'N	52°19'N	52°13'N
Longitude	163°58'W	161°40'W	163°15'W	165°19'W	163°31'W	162°19'W	161°09'W	157°03'W	154°12'W	151°06'W
Date	VII-16	VII-16	VII-20	VII-20	VII-21	VII-21	VII-22	VII-22	VII-23	VII-23
Time (GCT)	0550	1600	0645	2040	0920	1725	0130	2000	0700	1945
Depth (m)	0	0	0	0	0	0	0	0	0	0
No. of Diatoms/liter	39(0)	18(1)	78(2)	41(3)	45(1)	16(3)	10(4)	39(3)	24(3)	49(2)
Diatoms (per cent)	100	100	100	100	100	100	100	100	100	100
Asteromphalus heptactis	-	-	-	-	-	-	-	-	-	-
Biddulphia aurita	-	-	-	-	-	-	-	-	-	-
Chaetoceros (total)	31	35	74	86	59	25	47	8.5	2.9	4.9
Subgenus Phaeoceros (total)	31	35	2.1	2.9	-	16	18	8.5	29	4.9
C. atlanticus	-	-	-	-	-	-	-	-	2.8	0.9
C. concavicornis	-	-	-	1.5	-	11	6.6	5.0	17	4.0
C. convolutus	31	35	2.1	1.5	-	3.7	11	3.5	8.9	-
Subgenus Hyalochaete (total)	-	-	72	83	59	9.2	29	-	-	-
C. affinis	-	-	-	-	-	-	-	-	-	-
C. compressus	-	-	1.9	26	-	-	-	-	-	-
C. constrictus	-	-	48	17	27	7.4	5.4	-	-	-
C. curvisetus	-	-	-	-	-	-	-	-	-	-
C. debilis	-	-	1.9	16	13	1.8	22	-	-	-
C. decipiens	-	-	-	-	-	-	-	-	-	-
C. didymus	-	-	18	2.9	5.3	-	0.7	-	-	-
C. distans	-	-	-	-	-	-	-	-	-	-
C. furcellatus	-	-	-	-	-	-	-	-	-	-
C. radicans	-	-	1.3	17	-	-	-	-	-	-
C. socialis	-	-	-	+	-	-	+	-	-	-
C. subsecundus	-	-	-	1.5	13	-	-	-	-	-
Corethron hystrix	-	10	4.0	0.7	-	-	-	0.2	0.2	0.6
Coscinodiscus excentricus	31	-	-	-	-	-	-	-	-	-
C. radiatus	7.7	-	-	-	-	-	-	-	-	-
C. spp	-	-	-	-	-	-	-	-	-	-
Denticula sp	-	-	-	4.1	-	17	2.7	47	36	65
Eucampia zoodiacus	-	-	-	-	-	-	-	-	-	-
Fragilaria islandica	-	-	-	-	-	-	-	-	-	-
F. oceanica	-	-	-	-	-	-	-	-	-	-
F. striatula	23	-	-	-	-	-	-	-	-	-

Table C-10a, continued

Station	31	32	33	34	35	36	37	n	o	p
Leptocylindrus danicus	-	-	1.5	-	9.3	-	-	-	-	-
L. minimus	-	-	16	-	-	-	-	-	-	-
Navicula sp	-	-	-	-	-	-	-	-	-	-
Nitschia closterium	-	-	-	-	-	-	-	-	-	-
N. delicatissima	-	-	-	-	-	-	-	-	-	0.9
N. longissima	-	-	-	0.9	-	-	-	0.2	0.3	-
N. seriata	-	-	1.0	0.4	27	55	30	43	34	28
Pleurosigma sp	-	-	-	-	-	-	-	-	-	-
Rhizosolenia alata	-	10	-	-	-	-	-	-	-	-
R. ala. f. indica	-	-	-	-	-	-	-	-	-	-
R. delicatula	-	-	-	-	-	-	-	-	-	-
R. fragilissima	-	-	-	1.0	-	-	0.2	-	-	-
R. hebetata f. hiemalis	-	-	-	-	-	-	-	0.2	-	-
R. heb. f. semispina	7.7	-	1.3	2.5	5.3	2.2	20	0.5	0.5	0.6
Stephanopyxis nipponica	-	-	-	-	-	-	-	-	-	-
Thalassionema nitzschioides	-	-	1.0	-	-	-	-	-	-	-
Thalassiosira decipiens	-	-	1.0	3.6	-	-	-	-	-	-
T. gravida	-	-	-	-	-	-	-	-	-	-
T. hyalina	-	-	-	-	-	-	-	-	-	-
T. nordenskioldi	-	-	-	-	-	-	-	-	-	-
T. subtilis	-	-	-	-	-	-	-	-	-	-
Thalassiothrix frauenfeldi	-	-	-	-	-	-	-	-	-	-
T. longissima	-	-	-	-	-	0.4	0.8	0.4	0.1	0.3
Tropidoneis antarctica v. polyplasta	-	-	-	-	-	0.4	-	-	0.4	-

TABLE C-10b. Less abundant diatoms (less than 5% at any station) in spaced water samples (330 ml) taken between 0 and 200 meters at Oshoro Maru stations in the Bering Sea.

PLANKTON DIATOMS	
Amphora sp	a-d, g, k, 15, 16
Bacteriastrum varians	34
Chaetoceros borealis	b, 3, 7, 12, 13, 16
C. danicus	13
C. peruvianus	a, 3, 6, 8, 13, 15, 16, 18, 20, 23, 36, 37
Phaeoceros miscellaneous	d, 6, 12, 13, 15
Chaetoceros affinis v. willei	13, 23
C. brevis	27
C. decipiens f. singularis	6, 14, 17, 18, 22, 23
C. laciniosus	37
C. nipponica	12
C. teres	27, 34
C. vanheurcki	23
Hyalochaete miscellaneous	e, 4
Coscinodiscus asteromphalus	a, c
C. oculus iridis	c, d, 12
Eucampia greenlandica	27
Fragilaria sp	13, 14, 16, 17
Lauderia borealis	13
Pleurosigma affine	14
Rhizosolenia alata f. gracillima	1, 33, o
R. bergoni	c, d, k, 24
R. imbricata	a
R. setigera	1
R. styliformis	26, 27, 1, 32
MISCELLANEOUS PLANKTON	
Ceratium intermedium	14
C. lineatum	26
C. longipes	a, b, 14, 16, 17, 21, 22, 24-27, 1, m, 28, 29
C. spp	c, 13, 17, 25
Dinophysis homunculus	e, 10, 13
D. ovum	26-29, 1, m, o, p
Peridinium spp	26-29, 1, m, 31-37
Acanthostomella norvegica	e, 2, 3, 14, 26, 1, m, 28
Codonellopsis frigida	5, 7, 9, 10, 13, 14, 18, 22, 26-28, 1, m, 34
C. sp	b
Leprotintinnus pellucidus	i, j, 12, 13
Parafavella denticulata	a, e, 2-4, k, 8, 10, 13-15
P. faceta	8, 9, 12, 14-16, 23
P. jorzenseni	a, f, g, 9
P. longidentata	e, 5
P. pacifica	26, 1, m, 28, 34, 37, o, p
P. subcylindrica	e, 14
P. ventricosa	26, 27
P. sp	a, b
Ptychocylis acuta	b, e, f, 4, 6
P. obtusa	2, 7, 9, 12, 13, 15-18, 22, 26-29, 1, p, 33, 34, 36
P. sp	d, e

TABLE C-11. Amount of chlorophyll a (mg/m^3) in water samples (1.5 - 3 liter) at 10 meters at Brown Bear stations.

Station No.	Chlorophyll a mg/m^3	Station No.	Chlorophyll a mg/m^3
110-1	3.05	110-34	2.20
110-2	2.30	110-35	2.28
110-3	1.00	110-36	1.48
110-4	1.81	110-38B	1.37
110-5	3.25	110-39	1.33
110-6	1.90	110-40	1.47
110-7	0.87	110-42	2.50
110-8	0.95	110-43	1.48
110-9	2.26	110-44	1.48
110-11	1.35	110-45	1.45
110-12	0.95	110-46	0.76
110-13	0.92	110-48	0.87
110-14	1.28	110-47	0.56
110-15	1.95	110-49	1.48
110-16	1.40	110-51	1.86
110-17	1.40	110-53	1.38
110-19A	1.90	110-54	0.76
110-19B	1.05	110-55	0.77
110-20	0.87	110-56	0.80
110-21	0.76	110-57	0.63
110-22	1.02	110-58	0.37
110-23	1.18	110-59	0.35
110-24	1.06	110-60	0.37
110-25	0.67	110-61	0.64
110-26	0.69	110-62	0.62
110-27	0.72	110-63	0.87
110-28	0.50	110-64	0.50
110-29	0.86	110-65	1.22
110-30	0.69	110-66	0.65
110-33	0.80	110-67	0.85
		110-69	0.77